

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

CONTENTGUARD HOLDINGS, INC.)(Civil Docket No.
)(2:13-CV-1112-JRG
VS.)(MARSHALL, TEXAS
)(
)(
)(NOVEMBER 18, 2015
APPLE, INC.)(1:13 p.m.

TRANSCRIPT OF JURY TRIAL

BEFORE THE HONORABLE RODNEY GILSTRAP

UNITED STATES DISTRICT COURT

APPEARANCES:

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(Proceedings recorded by mechanical stenography, transcript
produced on CAT system.)

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1 P R O C E E D I N G S

2 (Jury out.)

3 COURT SECURITY OFFICER: All rise.

4 THE COURT: Be seated, please.

5 Dr. Kelly, if you would return to the witness
6 stand, please.

7 And, Mr. Thomas, you may return to the podium.

8 MR. PRITIKIN: Your Honor, we have one matter we
9 would like to raise before the jury comes back.

10 THE COURT: What's that, Mr. Pritikin?

11 MR. PRITIKIN: Yes. There was an open issue
12 presented by one of the slides, I think, that were given to
13 the Court. It concerned this rsync. And we understand --

14 THE COURT: I'll be prepared to talk about that at
15 the afternoon recess.

16 MR. PRITIKIN: That's fine. Our only concern,
17 Your Honor, is that we would want to know where we're going
18 on that before we finish with Dr. Kelly because he,
19 obviously, would be our last opportunity to address the
20 issue if it were going to be injected into the case now.
21 That's the only reason I raise it now.

22 MR. THOMAS: And in fairness, Your Honor, I was
23 going to ask him about that on cross because I think they
24 opened the door on it on their direct when they asked him.

25 THE COURT: Well, I had a delightful lunch

1 digesting your competing proposals for the final jury
2 instructions, and I didn't get to the rsync issue. I had
3 planned to do that when we had our afternoon recess. But if
4 you're telling me that both sides believe it's necessary
5 that that be done before --

6 MR. THOMAS: Your Honor, if I may, I think that
7 door was opened up on direct. They asked Dr. Kelly about
8 rsync and whether it changed his opinion. I'm going to ask
9 him about that testimony.

10 And then I'm going to ask him a few other
11 questions and show him maybe one other document to see if
12 that would have an effect on his opinion. But I do think
13 they opened the door on that on direct when they asked him:
14 You know, you heard the testimony about rsync. And then
15 they said to him: Does that change your opinion on
16 anything?

17 THE COURT: Mr. Pritikin?

18 MR. PRITIKIN: I don't have a problem with those
19 questions, Your Honor. The concern we would have is if
20 there's going to be a new infringement theory that we hear
21 about in the rebuttal case with Dr. Goodrich and we don't
22 have a chance at that point to address. But if they want to
23 ask Dr. Kelly, I don't have a problem with that.

24 THE COURT: All right. Then let's go forward with
25 Dr. Kelly on that basis.

1 All right. Let's bring in the jury, Mr. Nance.

2 COURT SECURITY OFFICER: All rise for the jury.

3 (Jury in.)

4 THE COURT: Welcome back, ladies and gentlemen.

5 Please have a seat.

6 We'll continue with the cross-examination of the
7 witness, Dr. Kelly, by the Plaintiff.

8 Mr. Thomas, you may proceed.

9 JOHN KELLY, Ph.D., DEFENDANT'S WITNESS, PREVIOUSLY SWORN

10 CROSS-EXAMINATION (CONTINUED)

11 BY MR. THOMAS:

12 Q Good afternoon, Dr. Kelly.

13 A Good afternoon, Mr. Thomas.

14 Q Dr. Kelly, at the beginning of your testimony this
15 morning, do you recall mentioning the company that you work
16 for?

17 A Yes.

18 Q I believe it's Kelly Technology, Inc.; is that correct?

19 A Well, it's Kelly Technology Group, but there is a
20 corporation Kelly Computing, Inc.

21 Q Now, are you the Kelly of Kelly -- Kelly Technology
22 Group?

23 A Yes, I am.

24 Q Okay. And, Dr. Kelly, this is not the first time
25 you've been retained to testify as an expert by Apple, is

1 it?

2 A That's correct.

3 Q In fact, over the last five years, you've been retained
4 by Apple to testify as an expert on their behalf at least
5 ten times, right?

6 A That's probably true. Eight -- eight times, certainly.

7 Q And that's in the last five years; is that correct?

8 A Correct.

9 Q And the amount of money that your company has billed
10 for your time and your employees' time on behalf of Apple
11 is -- where would you estimate that? At somewhere on the
12 order of 8 to \$10 million?

13 A Over the last four or five years, it would be less than
14 that, but it's -- it's in the millions.

15 Q Okay.

16 MR. THOMAS: Could I go back to Slide 17 from
17 Dr. Kelly's presentation?

18 Q (By Mr. Thomas) Dr. Kelly, this usage rights definition
19 that we have up here, the Court did not require in this
20 definition that the usage rights or the indications of the
21 usage rights travel with the content, did they?

22 A Well, if you're asking if those words are specifically
23 here, no. But I believe that that's what is required in
24 order to satisfy the Court's definition.

25 Q Well, when the Court presents this definition and only

1 this definition for the definition of usage rights, the
2 Court did not require in this definition that the
3 indications of the usage rights or the usage rights and
4 conditions travel with -- didn't say the words "travel with"
5 did it?

6 A I think you asked me two questions. Are the words
7 "travel with" here? No, they're not. But is -- is that
8 required in order to satisfy this definition? Then, yes, it
9 is.

10 Q And the Court didn't say they have to travel together.
11 Those words aren't in here, is it?

12 A Those explicit words are not present, correct.

13 Q And you think the "attached" word requires that they
14 travel together?

15 A The attached or treated as attached.

16 Q So you think that if they are just -- if they're just
17 treated as attached, that requires that the usage rights and
18 the content must always travel together at all times?

19 A The way I interpret the Court's definition is that the
20 indications are attached or treated as attached. I don't
21 separate those out as one option is attached and the other
22 option is treated as attached. This is attached or treated
23 as attached, which is what you would expect in a computer
24 system.

25 Q So you see no distinction whatsoever between the word

1 "attached" and then the expression "or treated as attached";
2 is that correct?

3 A Well, that's not what I said. What I said was the --
4 the Court's definition says: Indications that are attached
5 or treated as attached.

6 And I believe that the "treated as attached" is
7 recognizing that -- that this system is a
8 computer-implemented system and that in the digital world,
9 this attached or treated as attached is meant to be how you
10 would do it in the digital world.

11 And in terms of traveling from one place to another, if
12 they're attached, they need to travel together. They need
13 to start at -- at the same place, and they need to end at
14 the same place.

15 MR. THOMAS: Your Honor, I move to strike that
16 last answer as nonresponsive, and I would ask for an answer
17 to my question.

18 THE COURT: I'll sustain the objection as to
19 nonresponsive, and I'll instruct the witness to limit his
20 answers to the questions asked.

21 The Defendant will have an opportunity to revisit
22 any topics they think are appropriate during redirect, but
23 during cross, Dr. Kelly, limit your answers to the questions
24 that are asked.

25 THE WITNESS: Yes, Your Honor.

1 THE COURT: Restate your question or ask your next
2 question, Mr. Thomas.

3 Q (By Mr. Thomas) Within the context of this definition
4 of usage rights, Dr. Kelly, do you see any distinction
5 whatsoever between something that is attached and something
6 that is treated as attached?

7 A In the digital world, there would be treated as
8 attached and attached is, in my mind, one concept.

9 Q So in your -- in your mind, there is no difference
10 whatsoever between attached and/or treated as attached as
11 those words are used in the Court's definition here; is that
12 correct?

13 A Well, there may be situations in which there are
14 differences in these words, but I understand this to say
15 that the indications are attached or treated as attached,
16 meaning this is a computerized system. This is working over
17 a network of computers.

18 And that's what this means, that in the digital world,
19 attached or treated as attached is one concept. They're not
20 two separate concepts.

21 MR. THOMAS: Your Honor, I move to strike that
22 last answer as nonresponsive.

23 THE COURT: Mr. Thomas, if you're going to ask him
24 what's in his mind, you're going to let him talk about
25 whatever he wants to talk about. So I'll overrule that

1 objection.

2 Q (By Mr. Thomas) When you were applying this
3 construction, sir, do you draw any distinction between
4 something that is attached and something that is treated as
5 attached?

6 A In the digital world, when I was applying this, there
7 was no -- I -- I didn't look for something that was attached
8 or something that was treated as attached. I took this as
9 one phrase.

10 MR. THOMAS: Could I please go to Slide 42?

11 Q (By Mr. Thomas) Do you recall being asked some
12 questions, Dr. Kelly, about this slide?

13 A I do.

14 Q Now, Dr. Kelly, I believe the point you were making is
15 that the same account key can be shared amongst different
16 devices. Is that the point you were making with this --
17 this particular slide?

18 A Well, the -- as it says here, that Apple servers can
19 authorize multiple devices, and -- and those would receive a
20 copy of the account key. It's the same account key.

21 Q And do you recall -- were you here in the opening --
22 during the opening argument?

23 A Yes, sir.

24 Q And you recall when Mr. Baxter used that key fob that
25 he used and said it was a switchblade; it had an actual

1 physical key blade, and then it also had a remote control
2 function?

3 Do you recall that?

4 A I do.

5 Q And, Dr. Kelly -- and Mr. Baxter said that --
6 analogized the attached and treated as attached to putting
7 the key in the lock was attached and using the key fob
8 remotely to open the door was treating it as attached.

9 Do you recall that?

10 A I do, yes.

11 Q Now, the same key fob -- or there could be multiple key
12 fobs that operate this same car door, right?

13 A There could be, yes.

14 Q And under Mr. Baxter's analogy, each would be treated
15 as attached to the car door when it was used as a remote,
16 right?

17 A Well, presumably, each one would open the car door.

18 MR. THOMAS: If I could go back to Slide -- I
19 believe it was Slide 17 for usage rights?

20 Q (By Mr. Thomas) Now, Dr. Kelly, the Court's
21 construction of usage rights here does not require that the
22 usage rights control the usage of the content. It doesn't
23 use the word "control," does it?

24 A The word "control" is not in here. I would agree with
25 that.

1 MR. THOMAS: And if I could go to Slide 50,
2 please.

3 Q (By Mr. Thomas) Dr. Kelly, do you recall when you were
4 asked some questions about the meta-rights patents, you
5 referred to some testimony that Dr. Martin gave earlier in
6 this trial?

7 Do you recall that?

8 A I do, yes.

9 Q And I believe your statement was that you think that
10 Dr. Martin is relying on the contract between the content
11 providers and Apple for his meta-rights theory of
12 infringement.

13 Did I get that right?

14 A I think that's true in part at least.

15 Q And so when you were asked the question just before
16 lunch: What's your understanding of Dr. Martin's testimony
17 about the legal contracts between the content providers and
18 Apple, did you not answer: I think he's relying on these
19 for his meta-rights theory of infringement?

20 Is that what you recall?

21 A That is correct.

22 MR. THOMAS: If I could please have up the trial
23 transcript from Friday -- last Friday morning, at Page 118,
24 Lines 10 to 20.

25 Q (By Mr. Thomas) And this is Dr. Martin's testimony last

1 Friday morning. Were you here for that, sir?

2 A Yes, I was.

3 Q And do you recall when he said -- when he was asked the
4 question: All right. And you testified about there are
5 legal contracts that the movie studios have with Apple?

6 Answer: I very briefly mentioned it perhaps, but I'm
7 not sure what you're referring to exactly.

8 Question: Well, let's be clear. The movie studios
9 have written legal contracts with Apple, correct?

10 Answer: Yes, sir, they do.

11 Question: And they have requirements in them, correct?

12 Answer: Certainly.

13 Question: But you are not relying on those legal
14 contracts for any part of your infringement analysis,
15 correct?

16 Answer: That's correct.

17 Do you recall Dr. Martin providing that testimony last
18 week?

19 A I didn't recall specifically, but I'm sure he did.

20 Q Now, you understand, sir, that with respect to how the
21 studios can define rules for Apple to use with the movie
22 studios' or the TV studios' content, that they present those
23 rules by filling in the blanks on what was that iConnect
24 screen that Dr. Martin explained to us.

25 Do you recall that?

1 A Well, I certainly recall that there is an -- there is
2 an iConnect screen. But, of course, many of the rules are
3 established well before that point.

4 Q But you didn't have any problem, or at least you didn't
5 point to any disagreement, on your answers to the question
6 from Mr. Anderson with respect to how Dr. Martin explained
7 the way Apple allows the studios to define certain things
8 like prices and release dates for the content that they're
9 going to send out.

10 A No. My problem was the suggestion that those came from
11 the providers, from the movie studios, and were sent to
12 Apple. In fact, they are created at Apple with that
13 iConnect application and perhaps by somebody in the movie
14 studio, but they are typing in to that application.

15 Q So it's your understanding that the meta-rights are
16 created by Apple in accordance with whatever information is
17 typed into the iConnect screen by the movie studios,
18 correct?

19 A That's correct.

20 Q So --

21 A Excuse me. If you don't mind, I'll finish the answer.

22 To the extent that those are meta-rights at all, and --
23 and I have given that they are not, but what Dr. Martin
24 pointed to, those are created on the Apple servers.

25 Q Based on the information that the studios type in to

1 that computer screen that Dr. Martin demonstrated for us as
2 the iConnect computer screen, correct?

3 A That's correct, yes.

4 MR. THOMAS: May I have up the definition of
5 "meta-rights" in -- it would be in the insert, Mr. Diaz, to
6 the jury's jury books. And I need the definition of
7 "meta-rights." If you could highlight that.

8 Q (By Mr. Thomas) Do you see the Court defined
9 meta-rights, sir, as: A right that, when exercised, creates
10 or disposes of usage rights or other meta-rights but that is
11 not itself a usage right because exercising a meta-right
12 does not result in action to content?

13 Do you see that?

14 A Yes, sir.

15 Q The Court's definition of meta-right doesn't define
16 who's creating the meta-right, does it?

17 A No, it does not.

18 Q Now, sir, you recall you were asked some questions
19 earlier this morning about some testimony that Mr. Ward
20 provided to some questions I asked yesterday where he
21 referred to something called "rsync."

22 Do you recall that?

23 A Yes, sir, I do.

24 Q And do you recall that he -- he called this rsync a
25 tool that was used to -- that the server team used to

1 distribute updates to the FairPlay server software in the
2 Apple data centers?

3 Do you recall that?

4 A I do.

5 Q Now, sir --

6 MR. THOMAS: May I approach the witness,
7 Your Honor? I have a demonstrative. It's a document that
8 was produced in the case.

9 THE COURT: You may approach the witness.

10 THE WITNESS: Thank you.

11 MR. THOMAS: If I could have this up on the
12 screen, please.

13 Q (By Mr. Thomas) This is an e-mail train between
14 Mr. Lionel Gentil and Bill Maxwell. Have you seen this
15 document before, Doctor?

16 A I don't recall seeing it before. I may have.

17 Q And do you know Mr. Gentil? His name has come up in
18 this trial.

19 Do you recall that?

20 A Yes.

21 Q And he's actually offered some testimony by way of
22 deposition in this case that we offered into the record.

23 Do you recall that?

24 A I do, yes.

25 Q And he was Apple's witness that was testifying with

1 respect to how Apple updates the servers in its data
2 centers, including the DRM servers.

3 Do you recall that?

4 A I don't recall specifically what his testimony was, but
5 I know he was an Apple witness that testified.

6 Q And looking down here --

7 MR. THOMAS: If we could go to the bottom of this
8 first page.

9 Q (By Mr. Thomas) On September 24th, 2014, Lionel Gentil
10 wrote: Looking at the script, you are doing one big rsync.
11 If you really want to save time here, I would have gone
12 rsync without SSH to send the files to Akamai.

13 Do you see that, sir?

14 A Yes, I do.

15 Q And do you see the response he got from Mr. Maxwell at
16 Apple was: Hi, Lionel. Data center security policies rule
17 out plain FTP or rsync without SSG. It has to be SFTP and
18 SSH.

19 Now, sir, have you seen, in the course of your work and
20 analysis that you've done on this case, these data center
21 security policy rules for the Apple data centers?

22 A I don't recall. I may have.

23 Q And do you see here, sir -- do you see where it says
24 "without SSG" in that top highlighted line? Do you think
25 that's probably a typo? It should be "SSH" to correspond to

1 what Mr. Gentil wrote in the e-mail below where he said: I
2 would have gone rsync without SSH?

3 A I suspect that's correct. I don't know what SSG would
4 mean.

5 Q And as of this date, it appears that Mr. Gentil was
6 being told that Apple data center rules where the FairPlay
7 and DRM servers are located, those data center security
8 policy rules rule out plain FTP or rsync without SSG.

9 Now, plain FTP means something that is transmitted
10 unencrypted and without a digital signature, right?

11 A Well, if it was sent plain FTP, it means that whatever
12 was sent would not be sent on a secure channel. It doesn't
13 implicate whether -- that what was actually sent is
14 encrypted or not. It's just the channel would be -- would
15 be insecure.

16 Q Right. And Mr. Maxwell at Apple's data center is
17 saying that their security policy rules prevent sending out
18 data in the data center plain or on plain FTP without a
19 secure channel, right?

20 A That's correct.

21 Q And he said it has to be SFTP. Do you know what SFTP
22 stands for?

23 A It stands for Secure FTP.

24 Q Secure FTP.

25 And SSH, what does that stand for?

1 A That's Secure Shell.

2 Q And those use digital signatures or cryptographic
3 signatures, don't they, sir?

4 A They use some mechanism for security. They don't have
5 to be digital certificates; they don't have to be digital
6 signatures; but there has to be some method of providing the
7 security on that channel.

8 Q But you're not aware of what that method is in the
9 Apple data centers, sir, because you don't recall seeing
10 these data center security policy rules, correct?

11 A Well, I do know what's -- how rsync is used to go from
12 the server team out to the FairPlay servers, and that does
13 not use a digital signature, and it does not use a digital
14 certificate. It uses a key pair, which is something quite
15 different.

16 Q A key pair, sir. Is that a public/private key pair?

17 A Yes.

18 Q So it's what's called "PPK"; is that correct?

19 A That's -- that's one type of -- of -- of key pair
20 approach.

21 Q And is it like an RSAX.509 public/private key pair?

22 A It varies on the actual implementation, but this one is
23 a way of avoiding logging in with a user name and a password
24 to the hundreds of different servers that need to be
25 updated.

1 Instead --

2 Q And when --

3 A I'm sorry. Instead, it sends a -- a key to each one of
4 the servers one time, and then -- and then the sender at the
5 server team verifies that it has possession of that key.
6 And then all of the FairPlay servers accept the update as a
7 result.

8 Q As a result of verifying that that key is one they
9 recognize, correct?

10 A That is correct.

11 Q And when did you learn that this was the way that the
12 FairPlay servers are updated with this public/private key
13 pair?

14 A Yesterday.

15 Q That wasn't something you were informed of before you
16 submitted your expert report in this case?

17 A That's correct. I didn't know about it.

18 Q But you had discussions with Mr. Gentil as part of your
19 preparation of your expert report in this case, correct?

20 A Yes, I did.

21 Q And you had discussions with Mr. Ward as part of your
22 preparation of your expert report in this case, right?

23 A I certainly did.

24 Q And neither one of those gentlemen explained this to
25 you before sometime yesterday; is that correct?

1 A That's correct. I had no idea that this was of any
2 issue in the case before yesterday.

3 Q Now, sir, you, I believe this morning, in answer to
4 certain questions, described Apple's system as a secure
5 container or a secure container approach.

6 Do you recall that?

7 A I do.

8 Q And I think you pointed us to some documents where it
9 was describing that there was a -- a -- two basic approaches
10 to DRM.

11 Do you recall that?

12 A Yes, indeed.

13 Q And that document -- one of them was written as early
14 as 1997.

15 Do you recall that?

16 A Correct. The -- the Stefik patent that I pointed to.

17 Q Actually, it wasn't a Stefik patent; it was a
18 meta-rights patent, wasn't it, sir, the '053?

19 A The '053 is a meta-rights patent, correct.

20 Q Because Dr. Stefik never described two basic DRM
21 systems in the way that the '053 patent does, at least not
22 in any of his writings, correct?

23 A That's correct. Those words came from the '053 patent.

24 Q And then there was an article, I think by Mr. Thanh Ta.
25 You referred to that, I believe, this morning.

1 Do you recall that?

2 A I do.

3 Q And that was not co-authored by Dr. Stefik either, was
4 it?

5 A It was not.

6 Q And you realize, sir, that when determining
7 infringement in this case, as you've told us earlier, you
8 always have to focus on comparing the accused system to the
9 claims as they have been construed by Judge Gilstrap,
10 correct?

11 A That is quite correct.

12 Q And so it's improper to try to determine infringement
13 by comparing an accused device to some device described
14 other than in the claims?

15 That would be wrong, right?

16 A Well, you ultimately compare it to the claims, of
17 course, just as I said. But it can be quite helpful to look
18 at other documents to -- to aid in the understanding of --
19 of what those claims mean.

20 Q But in the end -- end game, you must compare the
21 accused device to the claims and not to something written in
22 some article outside of the patent, correct?

23 A That is correct.

24 Q And not to something written in some other patent,
25 correct? You don't compare it to some other patent to

1 determine infringement of claims in the Stefik patents,
2 right?

3 A No. You compare it to the claims that -- that you
4 are -- you are looking at.

5 Q Now, Dr. Kelly, you probably reviewed a whole lot of
6 Apple documents in this case, correct?

7 A That's correct.

8 Q And we know that according to you, this secure
9 container approach to DRM was one of the two basic
10 approaches that were around, starting in the late '90s,
11 right?

12 A Correct.

13 Q And that extended throughout the development time when
14 Apple was creating its DRM scheme, right?

15 A That's correct.

16 Q And you think Apple uses that secure container
17 approach, correct?

18 A I do.

19 Q Have you shown us any documents from Apple at all that
20 describe their system as a secure container approach?

21 A No. I don't think they use that term at Apple.

22 Q And as a -- even though that was one of the two basic
23 schemes -- secure container and trusted system -- nowhere at
24 Apple have you seen any documents where Apple describes its
25 system as that secure container basic approach to DRM? You

1 haven't seen any such documents, have you?

2 A That's correct. They don't use that term at Apple.

3 Q But they use the term "trusted" a lot, don't they, sir?

4 A They do.

5 Q And they use the term "system" a lot, don't they, sir?

6 A Well, of course they do, yes.

7 Q And they use the term "secure systems" a lot, don't
8 they, sir?

9 A Yes, they do.

10 Q And they use the term "secure and trusted" a lot to
11 describe their DRM system that's accused of infringement in
12 this case; isn't that true?

13 A Yes. As a matter of -- of plain English, they do. But
14 they are not using that to -- in the same way that the Court
15 has given us.

16 MR. THOMAS: I have no further questions for this
17 witness, Your Honor. I pass the witness.

18 THE COURT: All right. Redirect, Mr. Anderson?

19 MR. DAVE ANDERSON: Yes, Your Honor.

20 THE COURT: Proceed when you're ready.

21 MR. DAVE ANDERSON: Thank you, Your Honor.

22 Mr. Simmons, could we bring up Slide 16, please?

23 REDIRECT EXAMINATION

24 BY MR. DAVE ANDERSON:

25 Q Dr. Kelly, do you remember being asked questions during

1 your direct examination about this slide, Slide 16?

2 A I do.

3 Q And do you remember that Mr. Thomas also asked you
4 questions about this during the cross-examination?

5 A Yes, sir.

6 Q Do you remember Mr. Thomas asking you whether
7 behavioral integrity needed to be maintained at all times or
8 needed to be maintained in support of usage rights? Do you
9 generally recall those questions and generally recall your
10 answers?

11 A Yes, I do.

12 Q Now, first of all, Dr. Kelly, in your own words, could
13 you describe to the Court, please, the -- the meaning of "in
14 support of usage rights" as you have understood it and
15 applied it in your infringement opinion?

16 A The -- the -- the purpose of the repository in these
17 claims is to store content and attach usage rights and do
18 that in a way so that those usage rights are -- are honored,
19 are maintained, are not changed. And that's what it means
20 to be in support of usage rights.

21 So anything that is able to corrupt those usage
22 rights -- I gave some examples, alter them or alter the
23 content -- would be something that would be of concern in
24 support of usage rights.

25 Q So specifically in the case of behavioral integrity, is

1 it the case that behavioral integrity in support of usage
2 rights can be just limited to DRM software that's installed
3 on a computer?

4 A No, not at all.

5 Q Why is it that in the case of behavioral integrity in
6 support of usage rights, it's not -- not sufficient to just
7 limit that to DRM software installed on a computer?

8 A Because any software that could be installed on the
9 computer would potentially be able to do something that
10 would alter usage rights, corrupt those usage rights, change
11 the DRM software itself, steal the keys.

12 There -- there are many possibilities in there. And --
13 and any of those would -- would potentially destroy the
14 support for usage rights.

15 Q Is -- is it easy or is it difficult to conceive of
16 software installed on a repository that wouldn't need a
17 digital certificate as required by this claim element?

18 A Well, I can't think of any. I can't rule out that
19 possibility, but I don't know what it would be.

20 MR. DAVE ANDERSON: Could we, Mr. Simmons, pull up
21 Slide 15, please?

22 Q (By Mr. Dave Anderson) Communications integrity needs
23 to be maintained in support of usage rights?

24 A Correct.

25 Q Now, your analysis was focused, Dr. Kelly, on

1 communications between and among FairPlay iTunes servers,
2 Akamai, user devices, and content transfer between user
3 devices and computers; is that fair?

4 A Yes.

5 Q Why is it that all of those things are relevant to your
6 analysis of communications integrity?

7 A Because this is -- has to be treated as an entire
8 system, and all of these various parts have to have the
9 properties of the repository. They have to be repositories.
10 They have to be trusted systems.

11 And so the communication between any one of those has
12 to fall under the -- an -- under the umbrella of
13 communications integrity.

14 Q So what happens if any one of these devices is not a
15 repository, as defined by the Court, with reference to the
16 requirement that communications integrity be maintained in
17 support of usage rights?

18 A Well, if one of these is not a repository, then the
19 communications integrity with that fails, and as a result,
20 you don't have communications integrity in the system.

21 MR. DAVE ANDERSON: Mr. Simmons, could we go to
22 Slide 13, please?

23 Q (By Mr. Dave Anderson) With reference to the questions
24 that you were asked, Dr. Kelly, by Mr. Thomas about whether
25 encryption is enough to satisfy the requirement of physical

1 integrity, would you please provide your views on that topic
2 in your own words?

3 A Certainly.

4 Physical integrity here says: Preventing access to
5 information in a repository by a non-trusted system.

6 Even if the information is encrypted, if you don't have
7 physical integrity, you can get to that information. It may
8 be in encrypted form, but you can get to -- you can access
9 that information. You can copy it from one place to
10 another. You can alter it. And that violates the physical
11 integrity requirement.

12 MR. DAVE ANDERSON: Could we get up on the screen
13 APD OC 001? That's the e-mail that was used in the
14 cross-examination. I may have to request Mr. Diaz's
15 assistance in that.

16 Q (By Dave Anderson) Do you still have that document in
17 front of you, Dr. Kelly?

18 A Yes, sir, I do.

19 Q Okay.

20 MR. DAVE ANDERSON: Mr. Diaz, if you would be so
21 kind as to expand the bottom e-mail on that first page
22 there.

23 Q (By Mr. Dave Anderson) Dr. Kelly, do you see here the
24 word "Akamai" in this e-mail?

25 A I do.

1 Q Looking at the e-mail in its entirety, does it appear
2 to you that these folks are talking about the -- the
3 transmission of files to Akamai?

4 A Yes, they are.

5 MR. DAVE ANDERSON: If you could, Mr. Diaz, go
6 back to the entirety. Thank you.

7 And if you could just blow up the -- the lines
8 that are yellow highlighted that begin with, "Hi, Lionel,"
9 in the following line.

10 Q (By Mr. Dave Anderson) Now, when you were asked
11 questions about this line, Dr. Kelly, Mr. Thomas added, I
12 believe consistently, the term "Apple" in front of the
13 phrase "data center security policy rules."

14 Do you recall that?

15 A I do.

16 Q Does the term "Apple" actually appear in the e-mail
17 line that's called out there in yellow?

18 A No, it does not.

19 Q Is there anything in this e-mail that suggests that
20 what's being discussed is the transfer of software to the
21 FairPlay servers within Apple?

22 A No. I -- it does appear to be talking only about --
23 about uploading content to Akamai.

24 Q If -- if this e-mail were used to suggest that there
25 was something going on here with SSG or SSH with regard to

1 the installation of software on the FairPlay servers, would
2 that be a fair characterization of this e-mail as you see
3 it?

4 A Well, it seems to me this is talking about uploading
5 content to Akamai. It is not talking about the transmittal
6 of software from the server group to the FairPlay server.
7 So I don't know if it's relevant to that or not.

8 MR. DAVE ANDERSON: Thank you, Mr. Diaz. We can
9 take that down.

10 Q (By Mr. Dave Anderson) You were asked questions about
11 whether rsync was a subject addressed by your rebuttal
12 report.

13 Do you remember that?

14 A I do.

15 Q And was it your testimony about whether rsync was
16 addressed in your rebuttal report?

17 A It was not addressed in my rebuttal report.

18 Q Why is your report called a rebuttal report?

19 A The purpose of my report is to respond to the expert
20 reports of -- of ContentGuard's experts. They write reports
21 where they explain their -- their allegations of
22 infringement, and then I look at those reports, I study
23 them, and then I respond to that and look at what they --
24 how they have alleged infringement. And then I set out what
25 I think, whether I think that they are correct or not.

1 Q Are you familiar with the report of Dr. Goodrich to --
2 to which report you were responding or rebutting?

3 A Oh, yes, indeed.

4 Q Was rsync a theory of infringement that was advanced in
5 Dr. Goodrich's report?

6 A Not that I could determine.

7 Q Were you present for the testimony of Dr. Goodrich here
8 in this courtroom?

9 A Yes, I was.

10 Q Was rsync a theory of infringement that was advanced by
11 Dr. Goodrich in his testimony in the trial?

12 A Not that I heard.

13 Q Was the first time that you heard rsync as being
14 suggested to have relevance to the issues in this trial, was
15 the first time that that happened, was that yesterday?

16 A Yes, it was.

17 MR. DAVE ANDERSON: Mr. Simmons, could we bring up
18 Slide 5, please?

19 Q (By Mr. Dave Anderson) Dr. Kelly, were the terms
20 "trusted system" and "secure container" used in the
21 ContentGuard patent?

22 A Yes, they were.

23 Q Have you seen these terms for describing these two
24 types of systems generally in -- in other literature outside
25 the literature that has been reviewed that was provided by

1 Xerox and by ContentGuard?

2 A Yes, I have.

3 Q Do you think that these "trusted system" and "secure
4 container" references fairly describe two fundamentally
5 different types of DRM systems?

6 A I do.

7 Q Even if a system isn't itself described using these
8 exact terms, is it -- is it still your opinion that these
9 are two fundamentally different systems as described in the
10 patents and the Xerox literature?

11 A Most definitely, yes.

12 MR. DAVE ANDERSON: Mr. Simmons, could we bring up
13 Slide 17?

14 Q (By Mr. Dave Anderson) Now, does a usage right, as
15 defined by the Court, Dr. Kelly, have to include a manner of
16 use?

17 A Yes, it does.

18 Q And as it discusses here indications, do you understand
19 "indications" to be merely an opportunity to view or some
20 type of presentation, or does a usage right have to tell the
21 repository what it can or cannot do with digital content?

22 MR. THOMAS: Objection, Your Honor. That's
23 leading.

24 THE COURT: Sustained.

25 Q (By Mr. Dave Anderson) As you understand the Court's

1 construction, Dr. Kelly, do usage rights tell the repository
2 what it can or cannot do with the digital content?

3 MR. THOMAS: Objection, Your Honor. That's still
4 leading.

5 THE COURT: Sustained.

6 MR. DAVE ANDERSON: Mr. Simmons, would you bring
7 up Slide 19?

8 Q (By Mr. Dave Anderson) Dr. Kelly, would you read into
9 the record the question and the answer that is here on
10 Slide 19 as provided in the testimony of Dr. Goodrich?

11 A Yes.

12 Question: Information in the usage rights tells the
13 repository what it can and cannot do with the digital
14 content, correct?

15 Answer: Yes, sir.

16 Q As you understand the Court's term, "usage rights," do
17 you agree with this statement or concession from
18 Dr. Goodrich?

19 A I do.

20 Q Tell us why.

21 A Because that's -- that's the purpose of usage rights.
22 These will be attached to content in the repository. And
23 the purpose of that is so that when a request to -- to play
24 the movie or -- or look at the book comes in, the repository
25 can look at the usage rights and determine whether or not

1 that manner of use is permitted.

2 Q Now, on cross-examination, Mr. Thomas asked you whether
3 the word "control" appeared in the Court's definition. Do
4 you recall that question and your answer?

5 A Yes, I do.

6 Q Does the word "control" appear in the Court's
7 definition of usage rights?

8 A No, it doesn't.

9 Q Does the absence of the word "control" suggest to you
10 that usage rights need not tell a repository what it can and
11 cannot do?

12 MR. THOMAS: Objection, Your Honor; leading.

13 THE COURT: Sustained.

14 Q (By Mr. Dave Anderson) So, as you understand it,
15 Dr. Kelly, are usage rights merely a means of -- of
16 displaying usage rules or -- or limitations on usage?

17 MR. THOMAS: Objection, Your Honor. That's still
18 leading.

19 THE COURT: Sustained.

20 MR. DAVE ANDERSON: Could we go back, Mr. Simmons,
21 to Slide 17?

22 Q (By Mr. Dave Anderson) Directing your attention,
23 Dr. Kelly, to the term "indications" and the further
24 language below "that indicate the manner in which the
25 digital work may be used," do you see that there?

1 A I do.

2 Q Would you explain to the jury why it is that that
3 aspect of the Court's definition of usage rights is
4 consistent with the testimony or concession made by
5 Dr. Goodrich?

6 A The idea here is that -- that there are indications and
7 they are attached or treated as attached to the content.
8 And then what they -- what those indications indicate is how
9 the digital work may be used.

10 And so what that means is it indicates -- those usage
11 rights indicate whether you can, for example, play the movie
12 or look at the -- at the electronic book.

13 MR. DAVE ANDERSON: Okay. We can take that down.

14 Q (By Mr. Dave Anderson) Were you present yesterday for
15 the testimony of Mr. Fasoli?

16 A I was.

17 Q Now, do you -- do you remember that Mr. Fasoli was
18 asked questions about usage rules within the Apple system?

19 A Yes.

20 Q Do you remember that at times, he was also asked
21 questions about usage rights in the Apple system?

22 A Correct.

23 Q Do you remember that Mr. Fasoli was asked to use
24 FairPlay vernacular in -- in responding to -- to those
25 questions?

1 A I do remember that.

2 Q How did you understand Mr. Fasoli to be using FairPlay
3 vernacular to -- to speak to usage rules and usage rights?

4 A Well, I -- I certainly understand that he was not
5 applying the Court's claim construction for usage rights.

6 Q Is -- is usage rights or usage rules a phrase that is
7 used in common vernacular in the world of computer science?

8 A Yes, it is.

9 Q Do you understand that that is the same or different as
10 Judge Gilstrap's construction?

11 A Well, Judge Gilstrap's construction is a -- is a very
12 particular construction that applies for these claims in
13 these patents. And that is not a general definition of
14 usage rights. It's the definition that we are to apply in
15 doing our infringement analysis. We are to apply those to
16 the claims and to the accused products.

17 Q If a fact witness, Dr. Kelly, were asked to apply
18 FairPlay vernacular in answering questions about usage
19 rights and he did so, would that affect your view and your
20 opinion about the application of the Court's construction to
21 the Apple system?

22 A No, it wouldn't. It's completely separate. What --
23 what the standard everyday meaning of those words "usage
24 rights" are is not relevant to this analysis.

25 What I have to do is apply the Court's definition, and

1 that's what I did. And it's this very particular definition
2 with specific limitations. That's what I did in my
3 analysis.

4 MR. DAVE ANDERSON: I have to ask again for
5 Mr. Diaz to display a slide. This is Slide 25 from the
6 cross-examination of -- of Dr. Bud Tribble.

7 Q (By Mr. Dave Anderson) Okay. Now, Dr. Kelly, do you
8 see here that at various places on this slide, an excerpt of
9 a document from Cloakware, appears the word "trust" or
10 "trusted"?

11 A I do see that.

12 Q Do you have any reason to believe, based upon your work
13 in this case, that the word "trust" or "trusted," as set
14 forth in this document, connects to Judge Gilstrap's
15 construction of the term "trusted" or "repository"?

16 A No, it does not. This is an example of using the word
17 in the vernacular. This is not by any means using Judge
18 Gilstrap's construction -- his definition for that term.

19 MR. DAVE ANDERSON: Mr. Simmons, could we pull up
20 Slide 35?

21 Q (By Mr. Dave Anderson) So on Slide 35, we have an
22 excerpt of the Nguyen '053 patent, one of the asserted
23 patents in the case.

24 Do you see that there, Dr. Kelly?

25 A I do, yes, sir.

1 Q And do you recall being asked a series of questions on
2 cross-examination about the definition of existing computer
3 environments as set forth in the yellow down there?

4 A Yes, I do.

5 Q And do you see the phrase "popular operating systems"?
6 Do you see that?

7 A I do.

8 Q First of all, what is it that you understand is being
9 expressed by the phrase or the term "e.g., Windows, Linux,
10 and UNIX?"

11 A Well, these are examples, merely examples. This is not
12 an exhaustive list.

13 Q What are these examples of?

14 A They're examples of popular operating systems.

15 Q And are these popular operating systems, systems that
16 are described here as -- as not trusted systems and cannot
17 be made trusted without significantly altering their
18 architectures?

19 A That is correct.

20 MR. THOMAS: Objection, Your Honor; leading.

21 THE COURT: Sustained.

22 Q (By Mr. Dave Anderson) Dr. Kelly, would you read the
23 portion of this passage into the record, please?

24 A Certainly.

25 This says: Existing computing environments -- sorry --

1 existing computing environments, such as PCs and
2 workstations equipped with popular operating systems --
3 e.g., Windows, Linux, and UNIX -- and rendering
4 applications, such as browsers, are not trusted systems and
5 cannot be made trusted without significantly altering their
6 architectures.

7 Q Now, do you recall being asked whether you knew if the
8 authors of this patent also had in mind Macs?

9 A Yes.

10 Q And what was your answer to -- to that question?

11 A Well, I, of course, don't know what was in their minds
12 when they wrote this document.

13 However, the Mac personal computers certainly fit into
14 this description of popular -- of -- of existing computing
15 environments with popular operating systems and rendering
16 applications such as browsers.

17 That would certainly apply to the Mac personal
18 computers, and, therefore, they would be not trusted
19 systems, and they would -- cannot be made trusted without
20 significantly altering their architectures.

21 MR. DAVE ANDERSON: Mr. Simmons, would you go to
22 Slide 48, please?

23 Q (By Mr. Dave Anderson) What is shown here on Slide 48,
24 Dr. Kelly?

25 A This is the -- the top part of the cover page of the

1 '053 patent.

2 Q Is this the same patent that we were just looking at
3 with that description of open -- open operating systems that
4 cannot be made secure?

5 A Yes, it is.

6 Q Is a person by the name of Xin Wang one of the
7 inventors of this patent?

8 A Yes, that's correct.

9 MR. DAVE ANDERSON: Would you go, Mr. Simmons,
10 please, to Slide 7?

11 Q (By Mr. Dave Anderson) Is Mr. Xin Wang one of the
12 authors of this document, Dr. Kelly, entitled
13 Self-Protecting Documents?

14 A Yes, he is.

15 MR. DAVE ANDERSON: If we could go to Slide 9,
16 Mr. Simmons.

17 Q (By Mr. Dave Anderson) Is this an excerpt, Dr. Kelly,
18 of the same document authored by Xin Wang, also one of the
19 inventors on the '053 patent that we were just looking at?

20 A Yes, he is. This -- this is from that document.

21 Q Would you direct your attention, sir, please, to
22 Line -- or rather Item 5 in this excerpt?

23 A Yes, sir.

24 Q Do you have that?

25 A I do.

1 Q Do you see here a reference in Item 5 to -- to Macs?

2 A I do.

3 Q Does this reference to Macs shed some light potentially
4 on the question of what the authors of the '053 patent had
5 in mind when they were talking about the kinds of systems
6 that could not be made trusted without significantly
7 altering their architecture?

8 A Well, it certainly tells me what the -- the authors of
9 this paper had in mind when they were describing the
10 different platforms. And the Mac, as I said, is entirely
11 consistent with the description here and the description in
12 the '053 patent.

13 Q And those authors include at least one person who is
14 also an inventor on the '053 patent?

15 A Correct.

16 MR. DAVE ANDERSON: You can take that down,
17 Mr. Simmons.

18 Q (By Mr. Dave Anderson) You were asked earlier today
19 about your recollection of testimony that was provided
20 yesterday by Mr. Fasoli about any incidents in which movies
21 carried a virus into the Apple system.

22 Do you recall those questions earlier today about
23 Mr. Fasoli's testimony yesterday?

24 A I do, yes.

25 Q In your own words, sir, what is your understanding of

1 what Mr. Fasoli said as you were asked earlier today?

2 A What I understood him to be testifying about was movies
3 that were on the Akamai servers that were downloaded to --
4 that were available for purchase, that were purchased and
5 that, in fact, had viruses or some other malware inside
6 them.

7 Q Is it Mr. Fasoli's testimony, as you understand it,
8 that there has been no instance of which he's aware in which
9 a movie carried a virus into the Apple system?

10 A I think he was discussing movies that came from Akamai.
11 That was --

12 THE COURT: Counsel --

13 A -- my understanding.

14 THE COURT: Counsel, approach the bench, please.
15 (Bench conference.)

16 THE COURT: I'm sorry, but we're not going to
17 spend this afternoon talking -- telling the jury what
18 another witness they've already heard said. I mean, the
19 best evidence of that is what the man said.

20 If you want to pull his testimony back up, that's
21 fine. But both of you are asking this man to speculate
22 about what somebody else said, what they intended. I
23 just -- I think both sides are on ground that's highly
24 improper here.

25 Why is it -- why is it proper under the rules to

1 ask Dr. Kelly what he understood Mr. Fasoli to say when the
2 jury heard every word that came out of Mr. Fasoli's mouth?

3 MR. THOMAS: I object to that question then, Your
4 Honor.

5 THE COURT: Well, you've been just as guilty.

6 MR. DAVE ANDERSON: So I was just trying to chase
7 the cross, Your Honor, and I was not --

8 THE COURT: There's a lot of chasing going on this
9 afternoon.

10 MR. DAVE ANDERSON: Well, I wasn't doing it very
11 effectively. I'll --

12 THE COURT: Well, you've got time to waste. They
13 don't.

14 MR. DAVE ANDERSON: I think I can get there,
15 Judge.

16 THE COURT: All right. I just -- I just -- I just
17 can't see that it's proper to continue to go down this track
18 so we need to move on.

19 MR. DAVE ANDERSON: Thank you, Your Honor.

20 THE COURT: Thank you.

21 (Bench conference concluded.)

22 THE COURT: All right. Let's move on.

23 Q (By Mr. Dave Anderson) Dr. Kelly, if there had never
24 been an incident with regard to the downloading of a movie
25 from Akamai to a user device in which that movie carried a

1 virus, would that, the absence of any such instance, suggest
2 that there was no need for the repository requirements as
3 set forth in the Stefik patents?

4 A No, it would not.

5 Q Are there burdens imposing unnecessary requirements in
6 a DRM system?

7 A Yes, there are.

8 Q Would you speak to the burdens of imposing unnecessary
9 requirements in a DRM system?

10 A It can make the system more complex. It can make it
11 more difficult to maintain. So to change over time, it
12 could put -- could make the -- the computers on which it
13 runs more expensive.

14 It could require special hardware or software on the
15 computers. It could cause the download speeds to be -- to
16 be slower. It could cause the systems to run less
17 efficiently.

18 There can be many burdens that -- it could put burdens
19 on the content providers to -- to provide the content in
20 some particular way. There are many places where -- where
21 it could have an impact.

22 MR. DAVE ANDERSON: Your Honor, may I have one
23 moment?

24 THE COURT: Yes.

25 (Pause in proceedings.)

1 Q (By Mr. Dave Anderson) Dr. Kelly, in view of the
2 burdens, as you have described them, of unnecessary system
3 requirements in the DRM system, are there practical reasons
4 not to require a digital certificate on content that's
5 included in -- in the Apple system?

6 A Yes. It increases the speed with which you can
7 download the content. So it -- the movies, say, get to your
8 device quicker. And as we heard yesterday, it uses less
9 battery power to get those movies down to the device. So,
10 there are clear benefits for -- for not requiring the
11 digital certificates.

12 MR. DAVE ANDERSON: I'm sorry, Your Honor. One
13 more moment, if I may?

14 THE COURT: That's all right, Counsel.

15 (Pause in proceedings.)

16 MR. DAVE ANDERSON: Mr. Simmons, could we bring up
17 Slide 58, please?

18 Q (By Mr. Dave Anderson) Dr. Kelly, starting with the
19 element of physical integrity, I'd like to ask you to
20 summarize your opinions here, please.

21 Why is it that you've placed an X next to "no physical
22 integrity; untrusted systems access information on the
23 device"?

24 A Because the Apple accused products do not have physical
25 integrity. They do not prevent untrusted systems from

1 accessing information on the device.

2 Q Why is it, Dr. Kelly, that you've placed an X on this
3 chart next to "no behavioral integrity"?

4 A Behavioral integrity requires that software be
5 installed with a digital certificate. And I've shown in
6 places -- several -- lots of places where the software is
7 installed without a digital certificate. So, therefore,
8 there is no behavioral integrity.

9 Q Why is it your opinion, as summarized here, that there
10 is no communications integrity?

11 A Communications integrity requires that devices only
12 communicate with trusted systems. And these devices
13 communicate with untrusted devices, and, therefore, there's
14 no communications integrity.

15 Q In total -- in total, as to the claim element of a
16 repository or a trusted system, what is your opinion, sir?

17 A There is no repository or trusted system in Apple's
18 accused products.

19 Q As to the claim element of usage rights that are
20 attached or treated as attached, what is your opinion,
21 Dr. Kelly?

22 A There are no usage rights that are attached or treated
23 as attached in Apple's accused products.

24 Q Why is that?

25 A Well, there's two primary reasons. It's the Apple

1 content -- the usage of that content is controlled by the
2 account key or the rental key, and those are not usage
3 rights.

4 And what ContentGuard's experts have pointed to, the
5 "kind" field and the "isRental" field of the purchase
6 requests, those are not usage rights.

7 But even if they were, they're not attached or treated
8 as attached. They come from different servers, and they
9 come at different times.

10 Q Taking all of these elements into account, Dr. Kelly,
11 what is your opinion about whether Apple's accused products
12 do or do not infringe?

13 A Well, as the title of this slide says, my opinion is
14 that Apple's accused products do not infringe any of the
15 five claims that -- that have been asserted in this case.

16 MR. DAVE ANDERSON: Your Honor, I pass the
17 witness.

18 THE COURT: Additional cross-examination,
19 Mr. Thomas?

20 MR. THOMAS: Yes, your Honor.

21 Mr. Diaz, if I may have that e-mail that we were
22 talking about up earlier?

23 RECROSS-EXAMINATION

24 BY MR. THOMAS:

25 Q You were asked some questions about rsync. Do you

1 recall that a moment ago on the redirect examination?

2 A Yes, sir.

3 Q And you said that the reason you didn't address rsync
4 in your expert report was because Dr. Goodrich didn't
5 address it in his expert report; is that right?

6 A He didn't allege infringement because of -- due to
7 rsync. It was not part of his theory, as I understood it.

8 Q And you only became aware that rsync was used for
9 getting updates to the DRM FairPlay servers yesterday,
10 right?

11 A Correct.

12 Q And you've had access to the Apple engineers --
13 Mr. Gentil, for example, and Mr. Ward, for example,
14 Mr. Fasoli, for example -- since you were retained for this
15 matter, right?

16 A That's correct.

17 Q And yet you didn't know that they were using keys and a
18 secure shell, an SSH communication channel, to load the
19 updates for the software to FairPlay servers until
20 yesterday, right?

21 A Well, what they use is that -- they use a key pair, and
22 they use rsync, and I found out about that yesterday.

23 Q And these key pairs, sir, they are used to digitally
24 sign a message, correct?

25 A No. They are exchanged to -- to set up a secure

1 channel.

2 Q To authenticate both ends of a communication link,
3 right?

4 A Correct.

5 Q And so this authentication presents proof that the
6 person who is sending something is who they say they are,
7 right?

8 A No. What this does is it simply establishes a secure
9 channel between two end points, the computer on the server
10 team and the computer that -- in this case, the FairPlay
11 server.

12 Q Now, do you think that Dr. Goodrich, had he known that
13 that was the way Apple was updating the FairPlay servers
14 using this public/private key encryption pair to
15 authenticate each end of the transaction -- do you think
16 that might have been something he wanted to know when he was
17 providing his infringement analysis in this case?

18 A I couldn't --

19 MR. DAVE ANDERSON: Your Honor, objection. I
20 object. It's speculative.

21 THE COURT: It is speculative. I'll sustain that.

22 Q (By Mr. Thomas) Sir, would that have been something you
23 wanted to know if you tried to understand how software
24 updates get loaded on to the FairPlay DRM servers -- that
25 was the question.

1 How does software updates get loaded on to the FairPlay
2 DRM servers? Would you have expected somebody to explain to
3 you that they're transmitted by the server team using SSH
4 with a public/private key pair?

5 A I would expect to be told that they are transmitted
6 and -- as -- as everybody understands. And the precise
7 details of that transmission would depend on the questions I
8 asked.

9 Q In this case, sir, you know that this case has dealt a
10 whole lot with how those communication links are set up
11 between the FairPlay servers and the FairPlay development
12 team.

13 You know that, right?

14 A How the servers are set up?

15 Q How the communication links are set up.

16 A Sure. Yes. True.

17 Q And one of the communication links is this link that's
18 described in this e-mail that we find out today is using SSH
19 with a public/private key pair exchange, right?

20 A Well, Mr. Thomas, are you asking me about what I know?
21 I -- I found out about -- I saw this e-mail today. I may
22 have seen it before. I don't recall. I saw this e-mail
23 today for the first time.

24 Q Well, you found out yesterday, sir, that Apple was
25 using rsync with a public/private key pair to update the --

1 the software on its FairPlay DRM servers, right?

2 A Correct.

3 Q And yet you're criticizing Dr. Goodrich for not
4 identifying that fact in his infringement report, something
5 you only found out about yesterday?

6 A No, Mr. Thomas. That's not true.

7 Q So you're not -- you're not trying to suggest that
8 Dr. Goodrich left anything out that he could have included,
9 right?

10 A What I am saying is that Dr. Goodrich set out certain
11 infringement allegations, and those are the ones that I
12 examined. I didn't see any allegation that rsync was part
13 of his infringement theories.

14 Q In the testimony for -- that Mr. Gentil, the Apple
15 witness, provided, do you recall whether he mentioned
16 anything about this rsync with this public/private key pair
17 when he was asked questions under oath about how the Apple
18 servers were updated?

19 A I don't recall that he did. I don't remember one way
20 or the other.

21 Q Going to this e-mail, sir, you were asked whether or
22 not you thought this e-mail applied to updates for the
23 FairPlay DRM software.

24 Do you recall that?

25 A Correct.

1 Q And you said you couldn't tell, right?

2 A That's right.

3 Q But it is the data center, the Apple data center, and
4 this gentleman, Mr. Maxwell, in the Apple data center, who
5 is referring to the data center security policy rules,
6 right?

7 A Well, that's the problem. I don't know which data
8 center they're talking about. Are they talking about
9 Apple's data center? Are they talking about Akamai's data
10 center? Are they talking about policies that -- that are
11 invoked when it's going to a third party like Akamai, or is
12 this a policy that -- that applies to all transmissions? I
13 just can't tell based on this.

14 Q Who usually assigns these keys that you're talking
15 about that both sides of the transaction have to have to
16 update the FairPlay servers? Would that be -- or any
17 servers that are being updated, according to this memo,
18 would the key be assigned by the data center security
19 personnel?

20 A There are various ways to do it. It can be -- it can
21 be generated on a -- on a local computer.

22 Q And that would be generated by the data center that was
23 hosting those computers, right?

24 A No.

25 What's -- what's happening here is the -- the -- it's

1 starting out at -- in the case of sending material to
2 Akamai, which is what this e-mail is clearly discussing --

3 THE COURT: Dr. Kelly, the question was: Is it
4 generated by the data center? And you said no.

5 He didn't ask you what's happening here. You need
6 to limit your answers to the questions asked. If he wants
7 to know what's happening here, that will be his next
8 question. But you answered the question fully when you said
9 no.

10 THE WITNESS: Thank you, Your Honor.

11 THE COURT: Let's proceed.

12 MR. THOMAS: Your Honor, I just need to get my
13 notepad off my desk.

14 THE COURT: That's fine, Counsel.

15 MR. THOMAS: May I have Exhibit AX-1045 up,
16 please, Mr. Diaz?

17 And if we could go to the page, I think, with the
18 five numbered paragraphs.

19 No. I'm sorry. I may have had that wrong. The
20 article. I believe, then, that was the 1997 article.

21 And is there a page with the five numbered
22 paragraphs that this witness was just being asked about a
23 moment ago? It's the bulleted paragraphs, I think. I'm
24 sorry.

25 No. I'm sorry. I was trying to look for the one

1 where the reference was to the Mac.

2 Do you know, Counsel, what exhibit that was?

3 145, please -- AX-145. And if we could go to
4 those numbered paragraphs, please.

5 Q (By Mr. Thomas) Paragraph 5, sir, you were -- do you
6 recall you were asked some questions about this paragraph?

7 A Yes, sir, I do.

8 Q And it says: Given the whole range of different
9 platforms, building trusted systems requires a complete
10 integration with a low-level operating system details,
11 period.

12 Since operating systems are constantly evolving,
13 trusted systems have to keep pace with every new release of
14 individual operating systems.

15 Now, it doesn't say that that can't happen, does it?

16 A No, it does not.

17 Q And the iTunes for the iOS operating system that runs
18 on the iPods -- I'm sorry -- the iPads and the iPhones,
19 iTunes is integrated into that operating system, isn't it?

20 A I'm not sure what you mean by that. The iTunes comes
21 with the -- with the device when you buy it.

22 Q So iTunes -- or Apple builds iTunes, builds the
23 operating system for their phones and iPads, right?

24 A They do.

25 Q And so they're building that operating system, and they

1 wanted a customer experience that's as seamless and as easy
2 as possible, we've heard in this case, right?

3 A They do.

4 Q So they want to try to integrate all of their apps with
5 their operating system so the customer can have the best
6 experience; wouldn't you agree?

7 A I would agree with that.

8 Q And iTunes on the iPad and the iPhone, that's the DRM
9 system that we're talking about in this case, right?

10 A That -- the DRM system includes the iTunes application
11 and, of course, the underlying FairPlay and everything else
12 that we've -- we've talked about.

13 Q And that's the software -- the iTunes and underlying
14 FairPlay software that Apple has tried to integrate into the
15 operating system for their devices so that the customer gets
16 a seamless experience and hopefully a good experience; would
17 you agree?

18 A Well, I wouldn't agree with the notion of integrating,
19 but they have -- those applications are on the device with
20 the operating system. And certainly, I agree the plan is to
21 make it as seamless and -- as possible.

22 MR. THOMAS: I have no further questions for this
23 witness. I pass the witness, Your Honor.

24 THE COURT: Redirect, Mr. Anderson?

25 MR. DAVE ANDERSON: Yes, Your Honor. I do have a

1 MIL issue to address to the Court, if I may approach, Your
2 Honor?

3 THE COURT: Approach the bench.

4 (Bench conference.)

5 THE COURT: If it's something about a question
6 that's already been asked, why am I hearing about it now?

7 MR. DAVE ANDERSON: Well, I think that --

8 THE COURT: Or is -- or is it something you are
9 anticipating?

10 MR. DAVE ANDERSON: Well, it's both, Your Honor.
11 I think that the suggestion has been made that that document
12 was not produced and that it was withheld, and I think it's
13 very prejudicial for Counsel to be suggesting to this jury
14 that Apple has withheld relevant information.

15 And so the reason I say it pertains both to a
16 question already asked and potentially questions that are
17 upcoming is that I could address this with further
18 questioning, but our request actually, Your Honor, would be
19 that the Court be given -- that the jury be given, by the
20 Court, an instruction that levels this out.

21 I am not looking for anything that would
22 overcorrect, but an instruction that would allow that jury
23 to know that this was a document that was produced and that
24 they should not draw any negative inference from the
25 suggestion that it was not produced.

1 This was available. It has -- Apple Bates number
2 was fully available to Dr. Goodrich contrary to the
3 suggestions made.

4 MR. THOMAS: Your Honor, when I introduced this
5 document, I said it was a production document from Apple
6 that I was using as a demonstrative. It's got a Bates
7 number on it.

8 He could have easily asked this witness whether it
9 has a Bates number and whether this witness has been looking
10 at Bates numbered documents for the last year. And he cites
11 to them extensively in his expert report. He knows what
12 Bates numbers are. He's been doing this for a long time for
13 a lot of people, and a lot of times for Apple.

14 So I don't see that there's any reason for any
15 sort of curative instruction, Your Honor. We're certainly
16 not trying to suggest that this wasn't a production
17 document. That's how we got it. But also, Your Honor, we
18 would be moving for this document to be entered into
19 evidence at this point.

20 THE COURT: Well --

21 MR. THOMAS: I think the relevant --

22 THE COURT: This -- this was brought up by the
23 Plaintiff as a demonstrative. It was not produced to the
24 other side as a demonstrative in advance of today.

25 MR. DAVE ANDERSON: No.

1 THE COURT: There was no objection to it taken up
2 by the Court before we started with the jury this morning
3 that has been the practice throughout the trial if there's
4 any disputed demonstrative. The Defendant probably could
5 say with a certain amount of justification: This was a
6 surprise, Mr. Thomas.

7 The time for preadmission has long past. The
8 other side has asked to admit documents during the course of
9 the trial, and I've denied that, and I'm going to deny this.
10 It's not an exhibit in the trial. It could have been
11 offered as an exhibit.

12 As you both have made it very clear, it was
13 produced and generated in the ordinary course of discovery.
14 You both had it all in advance of the time that your
15 preadmitted exhibits were due with the Court.

16 The fact that it's not a preadmitted exhibit rests
17 with you, not with me. And I'm not going to introduce it or
18 consider it an admitted exhibit.

19 I don't think the jury has any idea what the Bates
20 number is. I am willing to tell the jury just for
21 clarification that this demonstrative was produced in the
22 ordinary course of preparing for the trial. I don't think
23 that hurts anybody.

24 MR. DAVE ANDERSON: Okay.

25 MR. THOMAS: And if I may just make a proffer on

1 that last point, Your Honor. We didn't hear about this
2 rsync used for updating software until Mr. Ward's testimony
3 yesterday. The Defendant brought it up during the direct
4 examination of this witness this morning.

5 And respectfully, Your Honor, you know, with that
6 kind of sandbagging on what was going on and what they know
7 is to be a critical issue in this case, we kept coming back
8 and coming back and coming back and asking for source code
9 to be produced, and we kept asking for witnesses.

10 And to find out at this late hour how they
11 actually do load this software is highly prejudicial, highly
12 prejudicial, Your Honor. We could not have known of the
13 relevance of that document until Mr. Ward's testimony
14 yesterday supplemented by this witness's testimony saying
15 they use a public/private key pair.

16 We did not know any of that, but that was
17 absolutely squarely within the information they were
18 obligated to come forward with.

19 THE COURT: Mr. Thomas, I'm not sure what I can do
20 about that right now. If you're asking me to declare a
21 mistrial, it's overruled.

22 If after the jury returns a verdict, based on what
23 that is, you want to move for a new trial on that grounds,
24 you may make your motion under Rule 59.

25 MR. THOMAS: Okay, Your Honor.

1 THE COURT: But there's not anything I can do
2 about it right now.

3 I will tell the jury this was produced in the
4 ordinary course. It's as much on one side as the other. As
5 the -- Kelly doesn't know about it. Goodrich doesn't know
6 about it. There seems to be --

7 MR. THOMAS: We want to ask Mr. Goodrich about it
8 tomorrow -- Dr. Goodrich about it tomorrow, Your Honor.

9 THE COURT: I'm sure you do.

10 And, you know, if we take as much time on the
11 remaining witnesses as we do, you're not going to have a
12 rebuttal case.

13 MR. THOMAS: I understand, Your Honor.

14 THE COURT: Your 30-minute estimate is about an
15 hour-and-a-half now.

16 MR. THOMAS: Yes, Your Honor.

17 THE COURT: But that's your business.

18 I'll -- I'll give the instruction like that. I
19 deny the motion to admit this as an exhibit.

20 MR. DAVE ANDERSON: Just one small thing from me,
21 Your Honor.

22 THE COURT: But I don't think there's been a -- I
23 mean, I'll give the instruction out of an abundance of
24 caution. I don't think that the Plaintiff has grossly
25 violated the MIL in regard to this not being produced. But

1 just so there's no question, I'll make it clear to the jury
2 it was produced in the ordinary course.

3 MR. DAVE ANDERSON: And I thank you, Your Honor.
4 And my only request in that regard would be that the
5 instruction indicate, as was pertinent to the testimony,
6 that this document was produced in the normal course before
7 the experts provided their reports. That seems to join with
8 the questions --

9 THE COURT: I'm not going to specify when it was
10 produced. I'm just going to make it clear it didn't come up
11 today out of thin air.

12 MR. DAVE ANDERSON: Thank you, Your Honor.

13 THE COURT: That's it.

14 MR. DAVE ANDERSON: Thank you.

15 (Bench conference concluded.)

16 THE COURT: Ladies and gentlemen, you've seen the
17 e-mail back and forth from Mr. Gentil and Apple to
18 Mr. Maxwell, which the Plaintiff has used as a demonstrative
19 during Dr. Kelly's cross-examination.

20 Just so there's no confusion, that document was
21 produced in the ordinary course of preparing for this trial.
22 It's not something that was a surprise or came to light only
23 today. It's been known about by both sides.

24 All right. Do you have further direct examination
25 of the witness, Mr. Anderson?

1 MR. DAVE ANDERSON: Could I have one moment, Your
2 Honor?

3 (Pause in proceedings.)

4 REDIRECT EXAMINATION

5 BY MR. DAVE ANDERSON:

6 Q Dr. Kelly, does the document that has just been
7 discussed here pertain to software that's being directed to
8 Akamai as you read the document?

9 A Yes, it does.

10 Q Does the document pertain to software updates to
11 FairPlay?

12 A Well, I don't see any discussion of FairPlay, FairPlay
13 servers, in this document.

14 Q Is there anything that you see in that e-mail that
15 suggests that Apple requires digital certificates in order
16 for software to be installed into the FairPlay servers?

17 A No, absolutely not.

18 MR. DAVE ANDERSON: That's all I have, Your Honor.
19 I pass the witness.

20 THE COURT: Additional cross-examination by the
21 Plaintiff?

22 MR. THOMAS: No, Your Honor.

23 THE COURT: All right. Dr. Kelly, you may step
24 down.

25 THE WITNESS: Thank you, Your Honor.

1 MR. DAVE ANDERSON: Your Honor, may I ask that
2 Dr. Kelly be excused from the trial?

3 THE COURT: Is there an objection by the
4 Plaintiff?

5 MR. THOMAS: No objection, Your Honor.

6 THE COURT: All right. The witness is released
7 and is free to stay or to leave.

8 THE WITNESS: Thank you, Your Honor.

9 THE COURT: Ladies and gentlemen, I expect the
10 next witness to be rather lengthy as well. We may be a
11 little early, but we're going to take a recess at this time.

12 If you'll just leave your notebooks in your
13 chairs, take this opportunity to stretch your legs and get a
14 drink of water. Don't discuss the case among yourselves.
15 Follow my other instructions, and we'll be back in here
16 shortly to hear from the next witness for the Defense.

17 The jury is excused for recess at this time.

18 COURT SECURITY OFFICER: All rise for the jury.

19 (Jury out.)

20 THE COURT: Let me see Mr. Baxter, Mr. Thomas,
21 Mr. Pritikin, and Mr. David Anderson in chambers.

22 We stand in recess.

23 (Recess.)

24 COURT SECURITY OFFICER: All rise.

25 THE COURT: Be seated, please.

1 MR. THOMAS: Just a quick note, Your Honor.

2 Mr. Baxter had to run back to the office. We
3 don't need to wait for him. I just wanted you to --

4 THE COURT: You don't literally mean run, do you?

5 MR. THOMAS: No. No, I didn't.

6 THE COURT: Okay. Are we ready to proceed?

7 MR. THOMAS: We are. Yes, Your Honor.

8 THE COURT: Defendant's ready to call their next
9 witness?

10 MR. DAVE ANDERSON: Yes, Your Honor.

11 THE COURT: Let's bring in the jury, Mr. Nance.

12 COURT SECURITY OFFICER: All rise for the jury.

13 (Jury in.)

14 THE COURT: Please be seated.

15 All right. Defendant, call your next witness.

16 MR. DAVE ANDERSON: Your Honor, Apple calls
17 Dr. Steve White.

18 THE COURT: All right. Dr. White, if you'll come
19 forward.

20 Mr. Anderson, has this witness been sworn?

21 MR. DAVE ANDERSON: Yes, he has.

22 THE COURT: All right. Please have a seat at the
23 witness stand, Dr. White.

24 THE WITNESS: Thank you.

25 THE COURT: All right. Counsel, you may proceed.

1 MR. DAVE ANDERSON: Thank you, Your Honor.

2 STEVE WHITE, Ph.D., DEFENDANT'S WITNESS, PREVIOUSLY SWORN

3 DIRECT EXAMINATION

4 BY MR. DAVE ANDERSON:

5 Q Dr. White, would you please introduce yourself to the
6 jury?

7 A Good afternoon. I'm Steve White.

8 Q Dr. White, have you ever testified at a trial before?

9 A No, sir, I have not.

10 Q Do you feel a bit nervous?

11 A Yes, sir, I do.

12 Q What is the subject, just in general terms, of your
13 testimony as set forth here on the first slide?

14 A My testimony is about the validity or invalidity of the
15 four Stefik patents-in-suit.

16 Q Would you please, Dr. White, tell us a little bit about
17 your professional and educational background?

18 A Sure.

19 In 1982, I got a Ph.D. in theoretical physics from the
20 University of California at San Diego.

21 I then went to work at IBM Research, which is one of
22 the premier research institutions in the world, for 26 years
23 in computer science, and I am a computer scientist.

24 Q What was your job at IBM Research?

25 A A lot of my work was in the area of cryptography,

1 information security, and digital rights management. I led
2 a team of 50 scientists and technologies in that and related
3 areas as well.

4 Q What was your job title at IBM Research?

5 A I was a research staff member. Fancy title. It's
6 equivalent of a faculty member of a university.

7 Q Did you obtain any patents for the work that you did at
8 IBM as you've described it?

9 A Yes, sir. I have 40 issued U.S. patents, a number of
10 technical papers. Again, a number of them in the areas of
11 information security and digital rights management.

12 Q Did you receive any other sorts of recognition for your
13 work at IBM?

14 A Yes, sir. I received approximately a dozen awards,
15 including the IBM Corporate Award, which is the highest
16 technical award in IBM. Of the 400,000 people in IBM, it's
17 given to only a handful of people a year.

18 Q Are you being compensated for your time spent working
19 on this case?

20 A Yes, sir, I am.

21 Q What is your hourly rate?

22 A \$650 an hour.

23 Q Is your compensation affected in any way by the outcome
24 of this case?

25 A No, sir.

1 Q Dr. White, have you formed any opinions about the
2 validity or invalidity of the Stefik patents that have been
3 asserted in this case?

4 A Yes, sir, I have.

5 Q Would you please summarize the opinions that you have
6 formed?

7 A I find that each of the asserted claims of the Stefik
8 patents would have been obvious to an ordinary person of
9 skill in the art based upon a combination of elements in
10 prior art. Since they're obvious, they're invalid.

11 Q What is the date on which you performed that analysis?

12 A The date on which I performed the analysis?

13 Q Sorry. The date as to which you assessed validity or
14 invalidity.

15 A Ah. The date at which I assessed invalidity or
16 validity was November of 1994, which is the date on which
17 the Stefik patents have priority and were filed.

18 Q Are you familiar with the concept of a person of
19 ordinary skill in the art as that concept is used in the
20 patent law?

21 A Yes, sir, I am.

22 Q Did you apply that concept of a person of ordinary
23 skill in the art as you were forming your opinions that the
24 patents are obvious?

25 A Yes, sir. I took the view of a person of ordinary

1 skill in the art as of, as I said, November of 1994.

2 Q How much work experience would a person of ordinary
3 skill typically have?

4 A I took a person of ordinary skill to be someone who had
5 a bachelor's degree and a couple of years of industry
6 experience in digital rights management or computer
7 security. On the other hand, he could have had a master's
8 degree.

9 Q In what field of study would those degrees typically
10 be?

11 A That would typically be computer science, computer
12 engineering, or electrical engineering.

13 Q Directing your attention now to this slide, Slide 4,
14 what is it that you're showing here on this slide?

15 A These are a few of the pieces of prior art that I
16 looked at in my analysis. And in particular, the pieces of
17 prior art that I looked at to help me establish what a
18 person of ordinary skill in the art at the time would know
19 and what their viewpoint would be in understanding this art.

20 Q Would you, Dr. White -- you used a term, "prior art."
21 Would you expand upon that and tell us what you mean when
22 you say "prior art"?

23 A By "prior art," I mean written publications, patents
24 and papers, that were published before November of 1994 that
25 could have shown all or part of the ideas that were in the

1 asserted Stefik patents.

2 In order to show obviousness, what I need to show is
3 that a combination of such documents would have made it
4 obvious to make the Stefik inventions before November of
5 1994.

6 Q So I want to ask you, Dr. White, about some of these
7 items that appear here on Slide 4 starting with the lower
8 left-hand corner where we see a reference to Denning. So
9 what is it that is -- is described there above the word
10 "Denning"?

11 A That is a picture of the cover of a college textbook
12 called Cryptology and Data Security written by Dorothy
13 Denning, and a well-known text at the time.

14 Q Let me, then, ask you about the next one in sequence at
15 the top there, but also the left-hand side of the slide that
16 says "Orange Book." What is that?

17 A The Orange Book is a publication that was authored by
18 the U.S. Department of Defense. I think it was discussed
19 earlier in the trial. That discusses how to make trusted
20 systems.

21 Q Now, Hellman, Griswold, Rosen, as depicted here on
22 Slide 4, what are those?

23 A Those are all U.S. patents or European patent
24 applications in one case that are related to the case in the
25 sense that they show elements of the kinds of repository

1 structures that -- that Stefik was talking about.

2 So they're examples of the kinds of things that I
3 looked at to understand what -- what art was available prior
4 to November of 1994.

5 Q Now, Slide 5, in directing your attention, Dr. White,
6 to Slide 5, starting here with the yellow portion of the
7 slide, what appears there?

8 A There are two papers. The one on the left that's
9 labeled White or ABYSS paper is a paper that I wrote, along
10 with my partner, co-author, Liam Comerford, of when we were
11 at IBM Research.

12 It's titled as ABYSS: A Trusted Architecture for
13 Software Protection. We were --

14 THE REPORTER: What's the title that was used?

15 THE WITNESS: I'm sorry?

16 THE REPORTER: What's the title that was used?

17 THE WITNESS: ABYSS: A Trusted Architecture for
18 Software Protection. My apologies.

19 Q (By Mr. Dave Anderson) Would you, Dr. White, spell for
20 the record ABYSS?

21 A Yes. Capital -- all capital letters A-B-Y-S-S. It's
22 an acronym.

23 Q And what does -- what does that acronym mean?

24 A It stands for A Basic Yorktown Security System.

25 Yorktown Heights was the town in which our research lab was

1 located, so we named it after that.

2 Q Directing your attention, then, to the second paper
3 that's presented there, what is -- what is that?

4 A That's a paper that's referred to -- I'll refer to it
5 as a Tygar paper. It was written by Drs. Doug Tygar and
6 Bennet Yee on a system that they called Dyad, and it was
7 published in January of 1994.

8 Q Do you know Dr. Tygar, the author -- or one of the
9 authors of the Dyad paper?

10 A Yes, I do. He was a professor at Carnegie Mellon
11 University. He was interested in working on secure
12 processors as a result of the work that we did in the ABYSS
13 paper.

14 So we spoke and he said he would try to interest a
15 graduate student in -- in working on the work.

16 Q And the graduate student, is that the person Bennet
17 Yee?

18 A Yes. Bennet Yee, the co-author of the paper, was
19 Dr. Tygar's graduate student. So I got to know Bennett.
20 And Mr. Yee, he came to work for me for a summer on the
21 ABYSS project.

22 So we had a -- he got a good -- a good background on
23 what we were doing with secure coprocessors and secure
24 coprocessor technology. And he went back to Carnegie Mellon
25 and wrote his Ph.D. thesis on the topic.

1 Q What appears there on the right-hand side here of
2 Slide 5?

3 A That's an image of one of the Stefik patents filed
4 November 23rd, 1994, after the White and Tygar papers.

5 Q Do the Stefik patents themselves discuss older DRM
6 systems?

7 A Yes, they do. There were a number of DRM systems
8 before the Stefik patents were filed, and they discuss
9 several of them.

10 Q Directing your attention to the -- the top box there,
11 would you describe for us what it is, in general terms,
12 the Stefik patent is -- is discussing in the prior art?

13 A This is a kind of system that I'll call a key-based
14 system in which a content is encrypted. It's distributed to
15 your computer. You can't use it because it's encrypted.
16 You need a key in order to decrypt it.

17 Q How about, Dr. White, the lower box? What's being
18 described there?

19 A That's a description of a European patent application
20 by a gentleman named Griswold.

21 Q I'd like to now ask you, Dr. White, if you could,
22 please describe for us how these basic key-based DRM systems
23 work.

24 A In the upper right corner, I've shown a game, Pac-Man.
25 Some of you may have heard of it. It was popular in the

1 '80s. I played it.

2 Here we've locked up the Pac-Man game, encrypted it
3 really, but it's shown as a suitcase with a lock, and then
4 distributed it to, say, your computer. But you can't use it
5 because it's locked up. It's encrypted.

6 So your computer contacts -- on the upper left side of
7 the slide here, contacts the content -- the content
8 distributor, and you say: I would like to -- to play this
9 game. And you pay the money for the Pac-Man game, and the
10 content distributor gives you a key, and you can use the key
11 to unlock the box and then play the Pac-Man game.

12 Q Did you attend the -- the trial, Dr. White, when the --
13 the Court received testimony from Dr. Stefik?

14 A I did, sir.

15 Q Do you recall that Dr. Stefik was asked about secure
16 container and trusted system DRM systems?

17 A I recall that.

18 Q What kind of system is a key-based system as appearing
19 here on Slide 7?

20 A It's a secure container system.

21 Q Back now to the Stefik patent. I'd like to ask you,
22 Dr. White, to take us through the quotes that appear on this
23 slide; first publishing the quote, and then explaining how
24 it relates to your work.

25 A So these are quotes out of the Stefik patents, and

1 they're describing the prior art -- in this case, Griswold,
2 the person who had the European patent application. And it
3 says here that the license check monitor generates request
4 datagrams which identify the licensee.

5 Q Now, how does that work? How does that license server
6 system work?

7 A You have software on your computer that you want to
8 run, but you can't run it because it needs a license in
9 order to run. And a license is a -- just a -- a bunch of
10 bits. It's a technical thing.

11 So your computer contacts the license server that's
12 remote, a -- a content distributor, and your computer says:
13 I would like a license for this software.

14 And if you've paid for the license, the license
15 distributor returns to you this bunch of bits that's the
16 license, and the software says: Yep, that's the right bunch
17 of bits, and you can run the software.

18 The license will come with an expiration date, which
19 might be 30 days from now, and you can run the software
20 anytime from now to 30 days from now. After that, it won't
21 run. You'll have to get a new license.

22 Q As set forth in the lowest box here on the screen, what
23 is it that the Stefik patents say is a downside to the
24 Griswold approach?

25 A The Stefik patents criticize Griswold because you had

1 to have communication with the license server. So if
2 your -- if your license ran out, you had to go back and
3 contact the license server again.

4 If the license was only valid for, say, an hour, you'd
5 have to be contacting the license server every hour, and the
6 Stefik patents considered that a burden.

7 Q Have you reviewed the actual Griswold patent
8 application that's discussed here in the Stefik patents?

9 A I have, sir.

10 Q Based on your review of the Griswold patent
11 application, is this description and this criticism by
12 Stefik, is this accurate?

13 A No, sir.

14 Q Why not?

15 A In the Griswold system, the license distributor can set
16 the time interval to anything he or she wants. It could be
17 a minute long, or it could be 30 days long, or it could be a
18 year long. In fact, it is discussed in the Griswold
19 application itself.

20 Q What -- what value does that expiring license approach
21 provide to DRM systems?

22 A It enables rental software as an example. So the --
23 the license distributor can set that period of time for
24 three months and say you can have a license to rent the
25 software for three months.

1 It will work fine for three months, but after that,
2 you'll have -- have to come back and pay for another issue
3 of the rental license.

4 Q During the time that you have spent attending this
5 trial, Dr. White, have you seen references to this document,
6 AX-145?

7 A Yes, sir, I have.

8 Q Do you see there the description of the trusted system
9 approach?

10 A I do, sir.

11 Q Do these authors describe the Stefik DRM system as a
12 trusted system approach?

13 A They do, sir. You can see it in the highlighting on
14 the top box. It says: The trusted systems approach. And
15 then in brackets, it says: Stefik 1995. And in papers --
16 other papers are referred to in exactly this way.

17 You see in the lower box the first highlighting is that
18 paper, "Letting Loose the Light" by Dr. Stefik.

19 Q Now, the authors that wrote this document and referred
20 to Dr. Stefik's trusted system approach, do you understand
21 them to have been colleagues of Dr. Stefik?

22 A Yes, sir. They were colleagues of Dr. Stefik at Xerox
23 PARC where Dr. Stefik worked, and my understanding is that
24 they worked on his DRM system with him.

25 Q Are there any other DRM systems that this paper

1 describes as trusted systems?

2 A Yes, sir. There are two.

3 The first one is noted in the upper box as Tygar and
4 Yee, 1994, which you can see in the lower box is the paper
5 that I showed you before by Dr. Tygar and now Dr. Yee,
6 called: Dyad: A System For Using Physically Secure
7 Coprocessors.

8 The second paper that's referenced in this paper as
9 being a trusted system is listed in the top box as White,
10 1987, and you can see below that that's my paper on ABYSS.

11 Q I'd like to direct your attention now, Dr. White, to
12 your paper, the ABYSS paper. Looking at the exhibit label,
13 is your paper AX-504?

14 A Yes, sir, that's correct.

15 Q Is that what appears in the left-hand side of the
16 screen here now?

17 A Yes, it does. That's the first page of our paper.

18 Q What appears on the -- the front or the right-hand side
19 of the screen?

20 A The black and white of the right-hand side of the
21 screen is Figure 1 out of my paper. I've added color
22 highlighting and labels because that's the part I'm going to
23 talk about.

24 Through the rest of my testimony, I'll take figures
25 like this. The black and white parts were from the paper,

1 and the color parts I've added for emphasis.

2 Q What were the key features of the DRM system in your
3 paper as set forth here?

4 A The two important parts that I want to talk about are
5 on the right in the blue, the secure coprocessor. This was
6 a processor that could protect content and
7 rights-to-execute.

8 On the left side, there's rights-to-execute, the
9 storage in -- in the -- in the secure coprocessor. The
10 secure coprocessors is just a computer. It's got a
11 processor. It's got memory. And the rights-to-execute it,
12 as well as the content, are stored inside a secure
13 processor.

14 Q Does the secure processor check whether the right to
15 execute will allow the software to run?

16 A Yes, sir. That's a primary function of the system.
17 There are rights-to-execute to indicate how the software can
18 be used or not used and the secure processor itself checks
19 the right-to-execute to see that it's satisfied before it
20 starts executing one of the protected applications.

21 Q When does that check occur in the manner that you have
22 described?

23 A It occurs before the application is loaded and
24 executed.

25 Q Is it before it starts running?

1 A Yes, it's before it starts running.

2 Q Now, what is the paper that appears here on Slide 11?

3 A In the background, this is the paper that I referred to
4 as the Tygar paper. This is the paper by Drs. Tygar and Yee
5 that we referred to before.

6 Q In general terms, what does the Tygar paper describe?

7 A The Tygar paper builds on our ABYSS work. Tygar was
8 interested in building on our ABYSS work, and he and his
9 graduate student did just that.

10 You can see that in the first box, it says: A more
11 primitive version of the copy protection application for
12 secure coprocessors, which is something they discuss in
13 their paper, originally appeared in Reference 63, which is
14 our paper.

15 Q When Dr. Tygar and now Dr. Yee refer here to a more
16 primitive version, they're referring to your paper?

17 A Yes, sir, they seem to be.

18 Q How do you feel about your former grad student
19 referring to your paper as more primitive?

20 A I think it's a reasonable characterization. They
21 added -- they added some nice features. They talked about
22 how our architecture could be implemented on a card that's
23 plugged into a normal PC to add security features to that
24 card.

25 They also talked about how to add public-key

1 cryptography and digital signatures to the kind of work that
2 we were doing.

3 Q Did you not use digital certificates in your paper, the
4 White paper?

5 A In our paper, we used a different cryptosystem.
6 There's two main kinds of cryptosystems just called
7 symmetric key and public-key cryptosystems.

8 We used a symmetric key crypto-system, just an
9 engineering system, and it was just an example. We said in
10 our paper, you could use either one, but we carried through
11 the example with that cryptosystem. And that uses a way of
12 authenticating messages that's different than what people
13 usually think of as digital certificates.

14 In this paper, they use public-key cryptosystems and
15 what people usually think of as digital certificates and
16 digital signatures.

17 Q Does -- does your paper, Dr. White, set forth the only
18 way to transfer a right-to-execute to another secure
19 processor?

20 A No, sir. In fact, the paper says there's quite a
21 number of ways to distribute the software and distribute the
22 rights-to-execute.

23 Q Would you point out to us, please, where it is in the
24 Tygar paper that there is a discussion of the use of digital
25 certificates?

1 A Yes, sir. The second box.

2 And you'll see, as I said, that they use public-key
3 cryptography, which is the thing one normally uses with
4 digital signatures and digital certificates. And there
5 they're using a signed digital certificate as -- as part of
6 setting up a communications protocol.

7 Q With reference to the right-to-execute, could you
8 please summarize for us, Dr. White, what it is that is the
9 right-to-execute as described in the White and Tygar papers?

10 A The right-to-execute is the thing that tells the secure
11 processor what it can and can't do with each of the
12 protected programs that it has.

13 Q So directing your attention, first of all, to the
14 left-hand side of the screen, what appears in general terms
15 on the left-hand side of the screen?

16 A The left-hand side of the screen describes parts of the
17 right-to-execute.

18 So the first part, as you can see on the right, are the
19 terms and conditions. This is what the secure processor is
20 allowed to do or not do with the software. So it could, for
21 instance, be able to run the software, a useful thing to do.
22 It could be able to transfer the right-to-execute and
23 software to another system, if it's allowed to do that.

24 So by setting elements of the terms and conditions, the
25 software vendor, the software distributor, can decide what

1 users are going to be able to do or not do with that
2 particular piece of software.

3 The second element is a key. The key is used to
4 decrypt the software. You can't decrypt the software
5 without the key. So only by having the key can the software
6 be used. That's the way the right-to-execute is linked to
7 the -- to the software.

8 And the last element is an identifying information. It
9 just allows the secure processor to be able to find the
10 right-to-execute -- the correct right-to-execute for a
11 particular application.

12 Q What are you illustrating with the red dotted lines on
13 the right-hand side of the screen?

14 A The red dotted lines illustrate that the
15 right-to-execute is encrypted. And it's encrypted with a
16 key known only to the secure processor that it's going to be
17 put on. That's one of the ways we keep it safe.

18 Q Does the Tygar paper also show the use of a
19 right-to-execute?

20 A The Tygar paper refers back to our paper for details
21 like this. This is common in academic papers. Tygar and
22 Yee wouldn't simply copy everything out of our paper and put
23 it in their paper. They'd say refer back to this other
24 paper for more information.

25 Q In your experience, Dr. White, is it necessary for the

1 Tygar paper to spell out again the concept that is described
2 in your paper, or is it sufficient for them to reference
3 it -- reference it in the manner that they have?

4 A For my purposes of understanding validity or
5 invalidity, it's -- it's perfectly reasonable for them to
6 reference the paper. And, in fact, that's one of the ways
7 that a person of ordinary skill in the art would say: Aha,
8 there's two papers. Perhaps I can use both of their ideas
9 together.

10 Q I want to direct your attention, first of all, to the
11 upper left corner of this slide. What is depicted there in
12 the upper left-hand corner of the slide?

13 A That's a piece of the figure that I showed you before,
14 Figure 1 out of my paper, labeled "Protected Processes."
15 And I'll use this as a way to represent a secure processor,
16 a secure processor being that physically encapsulated thing
17 that protects content and rights-to-execute.

18 Q Is that the same thing that's depicted in the lower
19 left?

20 A Yes. I depicted two of them here because I'm going to
21 have them talk to each other.

22 Q And what is it that's depicted in the center of the
23 left-hand side of the slide?

24 A In the center, the pink arrow indicates a secure
25 communications channel that the two secure processors set up

1 between each other. And they're, in this particular case,
2 transferring the encrypted Pac-Man game and the encrypted
3 right-to-execute that formally resided on the top secure
4 processor to the bottom secure processor.

5 Q The quotes on the right-hand side of the page, are
6 those from your paper?

7 A Yes, sir, they are. The top one says that when you
8 have a network connection, that both the software and the
9 right-to-execute can be transmitted on the network as you
10 see in the diagrams. The lower one says that you can use
11 secure cryptographic channels to do this.

12 Q How does the concept that you've just described,
13 Dr. White, of using secure cryptographic channels relate to
14 what appears in the Stefik patents?

15 A The Stefik patents do the same thing. They have two
16 repositories, in their terminology. They have content and
17 right-to-execute that are attached or treated as attached in
18 the Court's terminology.

19 They reside on one system. They're transmitted
20 together to a second system, and they reside on the second
21 system. And that communication is over a secure
22 communications channel.

23 So what I'm showing here with the names changed is the
24 same concept as is in the Stefik patents.

25 Q Would you, Dr. White, walk us through the steps that

1 are described here on the left-hand side? How is it that
2 this occurs under the system described in your paper?

3 A Sure.

4 So in -- in the beginning of this example, the content
5 and the right-to-execute reside on the upper secure
6 processor. And perhaps it has the right-to-execute that
7 game. So that's -- that's Alice, and Alice is playing that
8 game. But now Alice wants to transfer that game to Bob,
9 wants to give it to Bob. Bob's in the lower box.

10 So the secure processor looks to see if it's okay to
11 transfer that application, and in this case, it is. So the
12 secure processor encrypts the Pac-Man game, encrypts the
13 right-to-execute, sets up a secure communication channel to
14 the lower processor, and moves those two files over the
15 secure channel to -- to the lower processor.

16 When they arrive at the lower processor, the secure
17 processor checks them to make sure that they're -- they're
18 valid, there's a digital signature to do so, and then the
19 Pac-Man game can be played, according to the
20 rights-to-execute, on the lower processor.

21 Q Are the right-to-execute and the contents always stored
22 together in the -- the system that you've described in your
23 paper?

24 A Yes, in the sense that they're always stored on the
25 same secure processor. They're obviously not stored on the

1 same bits.

2 Q Are they always communicated together?

3 A Yes, sir. They're always communicated together.

4 That's -- that's how you know they are attached to each
5 other.

6 Q Do you have an opinion, Dr. White, as to whether this
7 system, as you have described it here, treat the
8 right-to-execute and the content as attached or treated as
9 attached?

10 A Yes, sir. They treat the content and the
11 rights-to-execute as attached or treated as attached because
12 they can be found together in the secure processor so the
13 secure processor can determine what rights it has to enforce
14 in moving or running or doing whatever with the -- with the
15 program, with the content.

16 They're transmitted over the same secure communication
17 channel from one to the other so you never lose the content.
18 You never lose the right-to-execute. They're always
19 together. They can be -- they can be used and understood by
20 the security processor as a unit.

21 Q Does your paper show any other ways of moving the
22 right-to-execute and the software program between secure
23 processors that does not involve attaching or treating them
24 as attached?

25 A Yes, sir, it does.

1 Q Would you describe that for us, please.

2 A Because the -- in our system the content, that's the
3 Pac-Man program, is encrypted, and the key is inside the
4 right-to-execute. And it's encrypted with a key that only
5 secure processors know.

6 You could transmit the content on a completely
7 different channel. You could -- you could give it to Bob in
8 the lower box on a DVD drive. And you could give the
9 right-to-execute to Bob through a network or something like
10 that.

11 And they could -- they could still -- they are still
12 able to -- it's -- it's the case that the program can only
13 be decrypted with a key. The key can only be delivered to
14 the legitimate owner at the bottom and only used by the
15 secure processor. So there's that chain of trust that's
16 built up.

17 So, yes, they don't -- in our system, because the
18 content is encrypted and the key is known to the
19 right-to-execute, it's not necessary for them to be
20 attached. But the example that I'm showing is one in which
21 they are attached or treated as attached.

22 Q As described by Dr. Stefik in his trial testimony and
23 described by the Stefik patents as well, what are the key
24 features of the Stefik claimed invention?

25 A The features that the Stefik patents say are the key

1 features of the Stefik inventions are repositories and usage
2 rights that are attached or treated as attached to content.

3 Q Has the Court provided us all with a definition of a
4 Stefik repository?

5 A Yes, sir. And we've seen this before, but let me
6 emphasize it. I think it's important.

7 It's a trusted system in that it maintains physical,
8 communications, and behavioral integrity in the support of
9 usage rights. And the Court has further defined each of
10 those integrities.

11 Q What do the Stefik patents themselves say about how
12 repositories protect digital works?

13 A Again, this is from the Stefik patents.

14 The upper box says: Digital works are stored in
15 repositories. Repositories enforce the usage rights for
16 digital works.

17 The lower box explains that the digital work Genie --
18 that is, the digital work -- only moves from one trusted
19 bottle -- that is one repository -- to another.

20 Q Now, are you familiar, Dr. White, with the Court's
21 construction of the phrase "usage rights" as the --

22 A I am.

23 Q -- phrase appears in the Stefik patents? Sorry.

24 A I am, sir.

25 Q What is the Court's construction of usage rights?

1 A The Court constructs usage rights as saying -- as
2 meaning indications that are attached or treated as attached
3 to a digital work and that indicate the manner in which the
4 digital work may be used or distributed, as well as any
5 conditions on which use or distribution is premised.

6 Q I've put in front of you now, Dr. White, the Stefik
7 '072 patent. Would you publish to the jury the statements
8 appearing there from the Stefik patent about the -- the
9 handling of usage rights under the Stefik system?

10 A Yes, sir.

11 Again, this is from one of the Stefik patents. The top
12 box says: The usage rights are attached directly to digital
13 works.

14 The center box says: It is fundamental to the present
15 invention that the usage rights are treated as part of the
16 digital work.

17 And the lower box says: Usage rights statements are
18 interpreted by repositories and are used to determine what
19 transactions can be successfully carried out.

20 Q What do the Stefik patents say makes their invention
21 different from the DRM system that came before?

22 A The Stefik patents say that the thing that makes the
23 Stefik patent invention different is the combination of
24 attached usage rights and repositories.

25 Q Did you identify any prior art that describes a DRM

1 system with attached usage rights?

2 A Yes, sir. Our paper describes a DRM system with
3 attached usage rights.

4 Q And when you say "our paper," you mean yourself and
5 Dr. Comerford, the ABYSS paper?

6 A Yes. Myself and my colleague, Liam Comerford, the
7 ABYSS paper.

8 Q Did you identify any prior art that describes the use
9 of trusted repositories with the three integrities required
10 by the Court's definition?

11 A Yes, I did. The Tygar paper that I referenced before
12 describes a system of that kind.

13 Q Did you identify any prior art that showed the
14 combination of attached usage rights and trusted
15 repositories?

16 A The combination of the Tygar paper and our paper, which
17 is referenced in the Tygar paper, describes such a system.

18 Q In November of 1994, was there anything new or
19 inventive about having usage rights and content working
20 together on a single device?

21 A No, sir.

22 Q In November 1994, was there anything new and inventive
23 about usage rights attached or treated as attached to
24 content being used on a Stefik-type repository?

25 A No, sir.

1 Q Was the combination that the Stefik patents claimed as
2 new and different actually new and different in November
3 1994?

4 A No, sir, it wasn't. Those ideas had been invented
5 before.

6 Q I want to now ask you about these individual claim
7 elements to which your testimony has already alluded,
8 Dr. White, starting with physical integrity.

9 Could you direct your attention, please, to Slide 19
10 and tell us, just starting in the upper portion of this box,
11 what is it that is depicted there?

12 A The left-hand side is, again, a picture of the secure
13 processors from our paper. The blue indicates physical
14 integrity. That's because it's -- it's put in a package
15 that is very physically secure. It's a -- a steel box.
16 Inside the steel box there's epoxy. Inside the epoxy,
17 there's wires. It detects tampering.

18 You can try and drill into it, cut into it. It will
19 detect that you're tampering with it, and it will erase all
20 of the sensitive information before a hacker can find out
21 what's there. It -- it -- it's -- it protects the keys. It
22 protects the rights-to-execute, and it protects the content.

23 The upper quote is from the Tygar paper, and it
24 discusses two of our prototypes, micro ABYSS and Citadel and
25 says that they provide physical security by employing

1 board-level protection. That is, there's a computer board
2 inside that package.

3 The lower quote is from my paper and describes secure
4 processors as being physically secure in that they are
5 contained inside of a tamper-resistant package.

6 Q What is set forth at the very bottom of the slide
7 there?

8 A That's the Court's definition of physical integrity:
9 Preventing access to information in a repository by a
10 non-trusted system.

11 And the physical security system that I just hinted at
12 does a very good job of that.

13 Q Dr. White, have you formed an opinion about whether the
14 protected processors described by the White and Tygar
15 papers -- do they have physical integrity in support of the
16 usage rights, as defined by the Court?

17 A The secure coprocessors described in the Tygar paper
18 and in my paper have physical integrity, as defined by the
19 Court, all of the time. They are built that way. They are
20 designed that way. They always have physical integrity.
21 And as a result, of course, they have it in support of usage
22 rights.

23 Q I'd like to ask you now, Dr. White, to describe what is
24 depicted on the left-hand side of this slide with reference
25 to communications integrity.

1 A This is, again, two secure processors, figures from our
2 paper, the pink line drawn in between for -- for
3 illustration by me. And this is two secure processors
4 setting up a secure communications session between the two
5 of them.

6 Q Does the Tygar paper show that?

7 A Yes, sir.

8 The upper quote says: A digitally signed certificate
9 of the public-key used by his secure processor is sent to
10 the software vendor.

11 This is the lower secure processor contacting the
12 software vendor, the upper secure processor, and using a
13 digital signature to set up a secure communication session.

14 Q What's the quote there on the -- on the middle of the
15 right-hand side of the slide?

16 A That's, again, from my paper, and it says that secure
17 cryptographic channels can be used to move both software and
18 rights-to-execute between protected processors.

19 Secure processors -- I've used the term synonymously
20 with protected processors. Secure processors only move
21 content and rights-to-execute on secure communication
22 channels.

23 Q What appears there in the lower right-hand corner of
24 the slide?

25 A That's the Court's definition of communications

1 integrity, which is: Only communicates with other devices
2 that are able to present proof that they are trusted
3 systems, for example, by using security measures such as
4 encryption, exchange of digital certificates, and nonces.

5 Q Does the combination of the White paper and Tygar paper
6 teach communications integrity as has been defined by the
7 Court?

8 A Yes, it does. And it not only teaches communication
9 integrity, but because rights-to-execute and content are
10 only sent over secure communication channels, communication
11 integrity is always found in support of usage rights.

12 Q Does the combination of the White and Tygar papers
13 teach behavioral integrity?

14 A Yes, sir, it does.

15 Q Directing your attention now, Dr. White, to the
16 left-hand side of this slide, what appears there?

17 A Again, this is a secure processor figure out of my
18 paper, and the colored highlights I've added for -- for --
19 to make it easy to see. They say "digital certificates,"
20 and they have a thing that looks like a signature on them.

21 And it indicates that the operating system of the
22 secure processor itself on the left, as well as the
23 applications that are stored inside of the secure processor,
24 each come with a digital signature to verify their
25 authenticity and a -- a digital signature and a digital

1 certificate.

2 Q What does the quotes appearing on the right-hand side
3 of the page tell us about behavioral integrity?

4 A These are both from the Tygar paper. And the upper one
5 discusses the idea of checking a software signature against
6 known values. This means checking the digital signature to
7 make sure it's the same digital signature you expected to
8 get for that piece of software.

9 In other words, it came from -- from the source that
10 you know that it came from.

11 The lower box talks about using fingerprints and
12 encryption to protect the integrity of the secure
13 coprocessor software. Fingerprints are one of the parts of
14 digital signatures, and encryption is something you do in
15 the process of creating a digital signature.

16 Protecting the integrity means making sure that no
17 changes can be made to that software without it being
18 detected by the digital signature and digital certificate
19 process.

20 Q As taught by the combination of the White and Tygar
21 papers, when does that check occur?

22 A That check occurs before the software is installed in
23 the secure processor.

24 Q Can it be said that it occurs as it enters the secure
25 processor?

1 A Yes, sir. It occurs immediately upon entry and before
2 installation.

3 Q Now, what's the quote that appears there at the bottom
4 of the slide, Dr. White?

5 A That's the Court's definition of behavioral integrity:
6 Requiring -- requiring software to include a digital
7 certificate in order to be installed in the repository.

8 Q Does -- does White and Tygar teach behavioral integrity
9 as so defined?

10 A Yes.

11 Q How so?

12 A White -- White and Tygar describes a system that
13 requires software to include a digital signature -- all
14 software to include a digital signature in order to be
15 installed in the repository.

16 Since it's all software all the time, the secure
17 processor always has behavioral integrity. As a result, it
18 has behavioral integrity in support of usage rights.

19 Q What appears here, Dr. White, on Slide 22?

20 A This is from Dorothy Denning's book on cryptography,
21 and it's a quote from a part of the book talking about
22 digital signatures. And she's referring to yet another
23 paper by Merkle and says: If the software is signed, the
24 nodes can check the validity of the software before
25 execution.

1 In other words, a computer can check software before it
2 executes it to see if it's got the correct digital
3 signature.

4 And it can, in the second quote: Refuse to execute any
5 program in -- what she's calling privileged mode -- that is
6 not properly signed.

7 In other words, it can reject software that is trying
8 to run but shouldn't run because it doesn't have the right
9 digital signature.

10 And the important quote for my purposes is the lowest
11 one: The idea -- this idea could be extended to all
12 programs, with the system refusing to execute any code that
13 has not been signed by some authority.

14 So, again, this is literally a textbook example because
15 it's from a textbook. It's an example from a textbook
16 published in 1983, some 11 years before Stefik's patents.

17 Q Why is it, Dr. White, that you mentioned that that
18 bottom quote is of particular interest to you?

19 A It's of particular interest to me because it's
20 connected with behavioral integrity. Behavioral integrity
21 requires that software have -- have a digital signature in
22 order to be installed in a -- in a repository. And this is
23 exactly that same idea discussed in 1983.

24 Q Would this technique be common knowledge for people of
25 ordinary skill in the art in November 1994?

1 A Yes, sir. It would have been common knowledge for
2 people in 1984.

3 Q I'd like to ask you now: Have you formed a conclusion
4 about whether the repositories, as you've described them,
5 have the three integrities, and would that have been obvious
6 to a person of ordinary skill in the art in November of
7 1994?

8 A Yes, sir. They have the three integrities, as shown
9 here. They have physical integrity because of the
10 tamper-resistant packaging. They have communications
11 integrity because they set up secure communication channels
12 and identify the other end of the channel before they
13 communicate.

14 They have behavioral integrity because they check
15 digital certificates before installing or loading software.
16 And all three of those are in support of usage rights.

17 Q Is the combination of the White and Tygar secure
18 coprocessor a repository as it's been defined by Judge
19 Gilstrap?

20 A Yes, sir. It's a repository because it satisfies these
21 requirements in support of usage rights.

22 Q What does that tell you about whether this portion of
23 the Stefik patent is -- is obvious?

24 A A person of ordinary skill in the art, having read the
25 Tygar paper, and having read our paper, would know about

1 physical integrity because that's what they talk about.
2 They would know about communications integrity because
3 that's what they talk about. And they would know about
4 behavioral integrity because that's what they talk about.

5 So, yes, a person of ordinary skill in the art would
6 know that those three integrities were satisfied by those
7 papers.

8 Q Directing your attention now, Dr. White, to Slide 24,
9 what's depicted on the left-hand side under the term
10 "right-to-execute"?

11 A Again, that's our little cartoon picture of a
12 right-to-execute with terms and conditions, the key for the
13 content and -- and -- and identifier.

14 Q What are you showing with the quotes on the right-hand
15 side of the slide?

16 A This describes the right-to-execute.

17 The first one says the right-to-execute controls the
18 entire range of actions that can be taken with respect to
19 the application.

20 So I've talked about how the right-to-execute can
21 control whether or not the secure processor can run the
22 application, can transfer the application, but those are
23 just two examples. It could be anything you could think of
24 and that you could put into computer code.

25 Q Where do these quotes come from?

1 A I beg your pardon. These are from the White paper, all
2 three of them. They're from our paper.

3 Q Do those quotes show usage rights?

4 A Yes, they do. The right-to-execute contains usage
5 rights. That's what we called terms and conditions, just a
6 different name but the same thing.

7 Q Do they contain indications of the manner in which
8 software can be used or distributed?

9 A Yes, sir, they do. What that means is that they
10 contain some way for the secure processor to know what it
11 can do or not do with the content. So it can know that it
12 either can or can't run the content, for instance, can
13 execute the content.

14 Q All right. Now, directing your attention again to the
15 left-hand side, is this the same diagram that you've showed
16 the jury before?

17 A Yes, it is, sir.

18 Q What are you showing here with the quotes on the
19 right-hand side of this slide?

20 A The quotes, which are both from my paper again, say:
21 Both software and right-to-execute can be distributed on
22 local or wide area networks, or by download from host
23 systems to workstations.

24 And secure cryptographic channels can be used to move
25 both software and rights-to-execute between protected

1 processors.

2 This is indicating that the software and the
3 right-to-execute, when it's being transmitted from one
4 secure processor to another, are attached or treated as
5 attached. They're sent on the same communications channel,
6 same secure communications channel at the same time.

7 Q How does the technique in the White paper, as you've
8 described it, Dr. White, compare with what's described in
9 the Stefik patents?

10 A This is the same technique as described in the Stefik
11 patents in terms of the secure communication channel. The
12 two secure processors open a communication channel between
13 them.

14 They send the right-to-execute and the content between
15 them on the secure communication channel, and they close the
16 secure communication channel, and now the content and the
17 secure -- and the right-to-execute reside on the second
18 secure processor.

19 Q Would you summarize for the jury your opinion on
20 whether the White and Tygar papers teach attached usage
21 rights?

22 A Yes, sir. The White and Tygar papers together teach
23 attached usage rights. The rights-to-execute in the White
24 paper that have terms and conditions, those are usage rights
25 under a different name.

1 They have indications of manners of use, whether you
2 can run the software, whether you can transfer the software.
3 They have -- can have conditions of use, can you use the
4 software 10 times but not 11, can you use it for 30 days but
5 not 31.

6 And they're attached or treated as attached because
7 they reside together on secure processors or they're
8 transmitted together between secure processors.

9 Q So do the -- do the White and Tygar papers taken
10 together teach the combination of repositories, as you've
11 testified earlier, and usage rights that are attached or
12 treated as attached as you've testified with reference to
13 this slide?

14 A Yes, they do, sir.

15 Q Have you performed, Dr. White, a claim-by-claim,
16 element-by-element analysis of the Stefik asserted claims in
17 reference to the White and Tygar papers?

18 A Yes, sir, I have.

19 Q What is the patent claim that's set forth on this
20 screen, Slide 27?

21 A This is what we've been calling the '859 patent,
22 Claim 1, and these are the individual elements of that
23 claim.

24 Q Why have you underlined certain portions of the claim
25 language, as set forth here on Slide 27?

1 A Those -- pardon me.

2 Those are the ones that I'd like to emphasize right
3 now.

4 Q All right. Do the Tygar and White papers teach a
5 distributed repository to refer to the first such underlined
6 term and another distributed repository as appears further
7 on down as you've underlined here in the claim?

8 A Yes, they do.

9 Secure processors satisfy the requirements of a
10 repository because there is more than one of them on a
11 network. They are a distributed repository -- just a
12 terminology.

13 And because there are two of them, there's two secure
14 processors in this claim, you have a distributed repository
15 and another distributed repository.

16 Q With reference to the underlined phrase "usage rights,"
17 as set forth there in '859 Claim 1, do Tygar and White teach
18 the usage rights requirements of this claim?

19 A Yes, sir, they do.

20 Secure processors enforce usage rights associated with
21 content and permit rendering devices to render the content.
22 In this case rendering is -- an example of rendering is
23 executing software. The Court's definition of rendering
24 says this, and that's what secure processors show.

25 Q And then looking at the phrase "requester mode of

1 operation and server -- server mode of operation," do the
2 Tygar and White papers teach those aspects of this claim?

3 A Yes, sir, they do.

4 They're -- they're fancy names. The requester mode of
5 operation simply means the secure processor that asks
6 another secure processor may I have some content.

7 Server mode of operation refers to enforcing usage
8 rights. So if there's content and usage rights on a secure
9 processor, enforcing the usage rights on that software
10 constitutes a server mode of operation.

11 Q Do the Tygar and White papers teach all of the other
12 requirements of this claim, '859 patent, Claim 1?

13 A Yes, sir, they do. Their standard computer operations
14 rendering can mean playing something back. It can mean
15 executing the Pac-Man game. And the rest of them are -- are
16 standard computer operations.

17 Q Do you have an opinion about whether the Tygar and
18 White papers together teach all the requirements of Claim 1
19 of the '859 patent?

20 A Yes, sir, they do.

21 Q Directing your attention, then, to Claim 1 of the '072
22 patent, does Claim 1 of the '072 patent also require usage
23 rights and rendering?

24 A Yes, it does.

25 I haven't emphasized them here because they were -- we

1 discussed them on the previous patent. The same elements
2 appear here, and the same elements are covered by the White
3 and Tygar papers for the same reason.

4 Q So then directing your attention to the first
5 underlined term here, "document platform," is "document
6 platform" taught by the White and Tygar papers?

7 A Yes, sir.

8 In this patent claim, "document platform" is defined to
9 mean the same thing that "repository" meant in the first
10 patent that we looked at. The Court said so. It's just a
11 definition of the term.

12 Q How about the underlined term "separate files"? Is
13 that taught by the White and Tygar papers?

14 A Yes, sir.

15 And that's -- I've underlined that because that's a
16 term that we haven't seen in the previous two patents. What
17 it means is -- what it says is that the digital document and
18 the usage right have to be in separate files.

19 Well, the digital document, that's the Pac-Man game.
20 The usage right is contained in the right-to-execute. Those
21 are, in fact, two files. And they aren't the same file, so
22 they're separate files.

23 Q Do you have an opinion about whether the White and
24 Tygar papers teach all of the requirements of Claim 1 of the
25 '072 patent?

1 A Yes, they do.

2 Q Let me direct your attention now to Claim 7 of the
3 '956 patent. Do -- does -- does Claim 7 of the '956 patent
4 also require usage rights and rendering?

5 A Yes, it does.

6 I haven't underlined them here because we discussed
7 them on previous slides, and the same papers, the same Tygar
8 and White papers for the same reasons cover these terms.

9 Q With reference to the first underlined term here,
10 "recipient apparatus," what is that recipient apparatus in
11 this claim?

12 A Again, it's a repository. The Court's definition says
13 so. It is just a different term for repository that's used
14 in this patent.

15 Q What does it mean for a recipient apparatus to -- to be
16 determined to be trusted?

17 A Again, "trusted" is a term that's defined by the Court,
18 and an apparatus that has been trusted is defined by the
19 Court to be a repository. So different words, same term.

20 Q Do you have an opinion about whether the Tygar and
21 White papers teach all of the requirements of Claim 7 of the
22 '956 patent?

23 A Yes, sir, they do.

24 Q And then Claim 6 of the '007 patent. How are the
25 requirements of Claim 6 of the '007 patent addressed by the

1 disclosures in the White and Tygar papers?

2 A This claim is very similar to the previous claim, but
3 it's from a point of view of the sending apparatus; that is,
4 the computer that's doing the transmitting instead of the
5 receiving.

6 So here it says: Sending apparatus. The previous
7 claim said: Receiving apparatus. But everything else is
8 the same. And since all secure processors are capable of
9 both sending and receiving, then both claims are satisfied.

10 Q Do you have an opinion about whether the Tygar and
11 White papers, in combination, teach all of the requirements
12 of Claim 6 of the '007 patent?

13 A Yes, they do, sir.

14 Q In asking you now, Dr. White, to summarize your
15 opinions, was the idea of creating a trusted system for DRM
16 a new idea in November of 1994?

17 A No, sir. It had been thought of before, and it had
18 been published before.

19 Q Did Dr. Stefik's colleagues acknowledge this?

20 A Yes, sir, they did.

21 Q How did they acknowledge this?

22 A The paper that we saw previously entitled
23 Self-Protecting Documents, written by three of
24 Dr. colleagues -- Dr. Stefik's colleagues at Xerox PARC
25 indicated that trusted systems were published in the Dyad

1 paper by Tygar and the ABYSS paper by myself and my -- my
2 colleague, Mr. Comerford.

3 Q Was using attached usage rights a new idea in November
4 1994?

5 A No, sir. That was published in our ABYSS paper
6 sometime before then.

7 Q What is it in particular about the ABYSS paper that
8 teaches attached usage rights before November 1994?

9 A The ABYSS paper teaches attached usage rights that are
10 attached to content that travel together with the content,
11 and that was in 1987.

12 Q Is that the right-to-execute that you had described?

13 A I beg your pardon. Yes. The right-to-execute is
14 described in the ABYSS paper, and that contains usage rights
15 in the Court's sense.

16 Q Now, has -- was the idea of combining repositories with
17 attached usage rights to control the use of content a new
18 idea in 1994?

19 A No, sir, it was not.

20 Q In your opinion, Dr. White, compared to the
21 technologies that already existed, was there anything new or
22 inventive in the asserted claims of the Stefik patents?

23 A Not in the asserted claims of the Stefik patents, no,
24 sir.

25 Q Would you please summarize your opinion overall with

1 regard to the White and Tygar papers?

2 A Overall the White and Tygar papers show that the claims
3 of the asserted -- the asserted claims of the Stefik patents
4 would be obvious to a person of ordinary skill in the art as
5 of 1994, some years after these papers were published.

6 As a result, the claims themselves are obvious in a
7 legal sense, and as a result, the claims are un -- invalid
8 under the law.

9 MR. DAVE ANDERSON: Your Honor, I pass the
10 witness.

11 THE COURT: All right. Cross-examination by the
12 Plaintiff.

13 MR. THOMAS: Yes, Your Honor.

14 THE COURT: You may proceed, Counsel.

15 MR. THOMAS: Thank you, your Honor.

16 CROSS-EXAMINATION

17 BY MR. THOMAS:

18 Q Good afternoon, Dr. White.

19 A Good afternoon.

20 Q Do you remember me? I was actually the person who took
21 your deposition some many months ago.

22 A Of course.

23 Q It's good to see you again, sir.

24 A Good to see you, sir.

25 Q I noticed that you didn't mention in your direct

1 examination what the burden of proof is for establishing
2 invalidity of a patent, a U.S. patent. You weren't asked
3 that question, were you?

4 A No, sir, I was not.

5 Q Okay. Now, you know, though, that the burden of proof
6 to establish that a patent that's been issued by the
7 U.S. Patent Office -- that burden of proof is by what we
8 call clear and convincing evidence, right?

9 A Yes, sir.

10 Q And that's -- that's greater than just a preponderance
11 of the evidence standard.

12 You understand that, right?

13 A Yes, sir.

14 Q Because a preponderance of the evidence standard is
15 what ContentGuard has to prove to establish infringement.

16 Do you understand that?

17 A Yes, sir.

18 Q But you and Apple have to come up with clear and
19 convincing evidence in order to establish that the
20 ContentGuard patents are invalid, right?

21 A Yes, sir.

22 Q Now, sir, you also recognize that the U.S. Patent
23 Office disagrees with your opinion because they've issued
24 the patents to Dr. Stefik.

25 You understand that, right?

1 A Yes, sir.

2 Q And you understand it's because the U.S. Patent Office
3 has evaluated those patents, has made an independent
4 decision that they should be issued, that the patents are
5 entitled to what we call a "presumption of validity."

6 Do you understand that?

7 A Yes, sir.

8 Q And it's that presumption of validity, because the
9 Patent Office has already done its job, that creates this
10 higher standard of proof to establish invalidity.

11 Are you aware of that?

12 A Yes, sir.

13 Q Now, are you also aware, sir, that when you're
14 evaluating this standard of obviousness, that means that you
15 didn't find all of the ideas in Dr. -- Dr. Stefik's claims
16 in just one device, did you?

17 A That's correct, sir. That's not what the -- the -- the
18 standard of obviousness is.

19 Q Right. And you didn't find each of Dr. Stefik's
20 inventions and his ideas in one article, did you?

21 A No, sir.

22 Q And you didn't find all of Dr. Stefik's inventions and
23 ideas in a single patent, did you?

24 A No, sir.

25 Q Instead, what you did is you decided you'd look back

1 and you'd find what everybody was working on before
2 Dr. Stefik filed his patent application, correct?

3 A That's one of the things I did, yes, sir.

4 Q And then you decided whether or not you could piece
5 together, from different places, all of the ideas and
6 concepts in Dr. Stefik's patents and call that an obvious --
7 obvious combination.

8 That's what you did, right?

9 A No, sir.

10 Q You -- you did go back and you had to find different
11 parts of Dr. Stefik's inventions in one place and other
12 parts in another. And then it's your opinion that it would
13 have been obvious as of 1994 to put those together, right?

14 A I found two papers, one that I wrote and one that was
15 written by a student of mine that referenced my paper. And
16 I decided that a person of ordinary skill in the art would
17 have done the same thing, yes, sir.

18 MR. THOMAS: Your Honor, I move to strike that
19 last answer as nonresponsive.

20 THE COURT: Overruled.

21 Q (By Mr. Thomas) Now, sir, you were working in this
22 field of DRM technology well before 1994, right?

23 A Twelve years before 1994, yes, sir.

24 Q Right. And so -- and you published your article, this
25 ABYSS article, in 1987, right?

1 A That's right, sir.

2 Q And there were a lot of people in that time frame
3 between 1987 and 1994 that were working in this DRM space,
4 weren't there?

5 A Yes, sir.

6 Q In fact, there were hundreds of people that were
7 working to try to solve the same problems that you were
8 looking to solve with your ABYSS system, for example, right?

9 A I don't know that there were hundreds, but there were
10 certainly others, yes, sir.

11 Q Well, let's just take a look at the number of people
12 that were working with you in the IBM Research facility.
13 You had about 8 to 12 other researchers working with you
14 just on this ABYSS project, right?

15 A Yes, sir, I did.

16 Q And then there were many more than that working in what
17 IBM called its production groups, right?

18 A Yes, sir.

19 Q And they all had knowledge of what you wrote in this
20 ABYSS article in 1987, right?

21 A They may have, yes, sir.

22 Q Well, you were certainly helping them try to develop
23 products based on your ideas that you described in your
24 article, right?

25 A Yes, sir.

1 Q So they had at least that much knowledge, whatever they
2 needed to try to build a system like you described in your
3 ABYSS article, right?

4 A They had the knowledge that they had to produce those
5 products, that's correct.

6 Q And these people were pretty smart people, weren't
7 they?

8 A Yes, sir.

9 Q In fact, they were pretty well-educated people, weren't
10 they?

11 A Yes, sir.

12 Q In fact, they had what we would call, at least,
13 ordinary skill in this field of technology; that is, in the
14 DRM field and computer science, right?

15 A Many of them, yes.

16 Q In fact, many of them would have even greater than
17 ordinary skill, right?

18 A Yes, sir.

19 Q Like yourself, for example. You are a person, are you
20 not, of extraordinary skill in this field of technology?

21 A That's not a term that's been defined by the Court or
22 in my report, but I would say I was a person above ordinary
23 skill in the art, that's true.

24 Q Okay. And you knew about what you were doing and what
25 you were working on as of at least the time you published

1 that article in 1987, right?

2 A I --

3 Q I'm sorry. 1987, is that when you published your
4 article?

5 A 1987, I knew enough to do the work to write the
6 article, yes, sir.

7 Q All right. And so between 1987 and 1994, you didn't
8 think about modifying your ABYSS device to change it the way
9 you're telling this Court would have been so obvious to do,
10 did you?

11 A Bennet Yee is the one who did that.

12 Q You didn't decide that you were going to try to modify
13 the ABYSS article, the ABYSS system, the way you're telling
14 this Court it would have been obvious to a person of
15 ordinary skill in the art to do it, did you, sir?

16 A Actually, my group went on to do exactly that and to
17 produce products that did that, yes, sir.

18 Q Not before November of 1994, did you, sir?

19 A We didn't produce products by then, but Bennet Yee had
20 written his paper by then and that and the White paper
21 together described the Stefik patent.

22 Q If you could just put your mind for a moment, sir, on
23 what you were working on in 1994 and before at the IBM
24 research center. Can you do that for me?

25 A Absolutely.

1 Q Okay. Sir, nobody in the IBM Research Center, between
2 1987 and 1994, decided that they were going to try even to
3 modify your ABYSS system the way you tell this Court anybody
4 of ordinary skill in the art would have found obvious to do
5 at any point during that time; isn't that true?

6 A No. In fact, that's exactly what they were working on.

7 Q You haven't explained or presented in this courtroom,
8 sir, have you, a version of your ABYSS system that was
9 modified the way you say somebody of ordinary skill in the
10 art would have done it according to this Dyad article, have
11 you?

12 A I've presented the combination of the Dyad article from
13 my student and a paper by myself that do cover the patent,
14 yes, sir.

15 Q Your ABYSS system, sir, you got that in mind?

16 A Yes, sir.

17 Q You have not presented in this courtroom an example of
18 your ABYSS system that was modified the way you have just
19 described prior to November of 1994, have you?

20 A Yes, I have, sir.

21 Q The actual system, sir, the ABYSS system, a system that
22 was built and operating, that's what I'm talking about, sir.
23 Did you -- have you described in this courtroom, sir, a
24 system -- an ABYSS system that was modified in the way you
25 say it was obvious?

1 A I'm sorry. You asked two different questions. Could
2 you restate the question?

3 Q Have you described to us, sir, one of your systems,
4 your ABYSS systems, a physical example of your ABYSS system
5 that was modified in the way that you describe in your
6 article?

7 A Yes, sir. I believe that the work in the Tygar paper,
8 referencing the White paper, describes exactly that kind of
9 system.

10 Q Does the Tygar paper describe an actual embodiment,
11 sir, a physical representation of the ABYSS system?

12 A Yes, sir.

13 Q No. One that was built; one which could be sold; one
14 that was being tested.

15 A I'm sorry. Those are two different questions. Is
16 there a physical representation of the system? Yes, sir,
17 there is.

18 Q And there was a physical representation of the system,
19 according to you, prior to November of 1994?

20 A Yes, sir.

21 Q That included the modification that you say is
22 described in the Dyad article?

23 A Yes, sir. Bennet Yee implemented that for his Ph.D.
24 thesis.

25 Q You haven't shown us what that system is, have you?

1 A No, sir. I've described it based upon his paper, which
2 is what the standard for obviousness is in this case.

3 Q You haven't presented evidence in this courtroom that
4 that device actually existed, have you, sir?

5 A Nor -- nor do I need to do so for an obviousness case.

6 Q And you haven't shown us any instance where you
7 thought, you thought, sir, to modify your system the way you
8 say that anybody of ordinary skill in the art would have
9 found to be obvious.

10 A I haven't presented that evidence here, no, sir.

11 Q So you're not claiming that it was obvious to you to
12 modify your ABYSS system the way you described in this
13 courtroom, are you?

14 A I haven't presented that testimony, no, sir.

15 Q In fact, you haven't presented that opinion in your
16 expert report in this case, either, have you?

17 A No, sir.

18 Q And that's not the position you're urging this jury to
19 accept either, is it, sir?

20 A What position is that, sir?

21 Q That you believed it was obvious and you actually
22 expressed that thought prior to November of 1994.

23 A I'm not asking the jury to believe that because they
24 can look at the papers themselves.

25 Q You, sir.

1 You, as an expert in this field, when you were working
2 in this field right before November of 1994, did you write
3 anything that described modifying the ABYSS system the way
4 you suggest is done in the Dyad article?

5 A No, sir. That's what Bennet was doing.

6 Q Do you, sir, modify your ABYSS system in the way that
7 you say was obvious in your 19 -- in that Dyad article?

8 A Yes, sir. I and my colleagues did modify the system in
9 that way.

10 Q Before November of 1994, sir?

11 A Yes, sir, we did.

12 Q You haven't presented that device here, though, have
13 you?

14 A No, sir. It's not part of my obviousness conclusion.

15 Q And you haven't presented that evidence to this jury,
16 have you?

17 A No, sir. It's not part of my obviousness conclusion.

18 Q And that's not part of your opinion that you offered in
19 your expert report, either, is it?

20 A No, sir, it's not.

21 Q Okay. And you're not relying on any work done by any
22 of the other researchers at IBM, these dozen or more
23 researchers that were working with you. You remember you
24 told me about those guys?

25 A Yes, sir, I remember.

1 Q Okay. Did any of them publish an article that modified
2 your ABYSS system the way you said would have been obvious
3 to anybody?

4 At any time, did they publish an article describing
5 that modification prior to November of 1994?

6 A Not to my knowledge.

7 Q Even though you say it would have been obvious to do
8 that to anybody of ordinary skill in the art, right?

9 A That's correct, sir.

10 Q But these 8 to 12 people, your co-workers at IBM, they
11 had the resources of IBM behind them, didn't they?

12 A Yes, sir.

13 Q So you had plenty of funding, right?

14 A Yes, sir.

15 Q You had plenty of other research facilities, right?

16 A Yes, sir.

17 Q You had some of the best minds in the world working
18 with you at IBM, right?

19 A Yes, sir.

20 Q But those people that you were working with at IBM,
21 they had, some of them at least, extraordinary skill in this
22 field of technology, right?

23 A Yes, sir.

24 Q But none of them described modifying your system the
25 way you say would have been obvious according to the Dyad

1 article, right?

2 A That's correct, sir.

3 Q And isn't it true, sir, that you say that that
4 knowledge of using digital certificates with your system,
5 your ABYSS system, you're saying that's really what would
6 have been the obvious modification, right?

7 A That's an important modification, yes.

8 Q Well, you were talking about there being trusted
9 systems, right?

10 A I mentioned the terms "trusted systems," yes.

11 Q I mean, the points that you pointed out to that were
12 important, you said, with Dr. Stefik's work were usage
13 rights, correct?

14 A Dr. Stefik said that the important parts of his
15 invention, and the -- this patents also say this -- the
16 Stefik patents also say this, that the important parts are
17 repositories and usage rights attached to content.

18 Q And that's what you were asked questions about, and
19 that's what you just focused on in your testimony here,
20 right?

21 A Yes, sir.

22 Q You didn't have a repository in the ABYSS system, did
23 you, the one you were working on at IBM?

24 A The ABYSS system is sort of an ambiguous term. We made
25 lots and lots of prototype systems. Perhaps we could refer

1 to what's described in the ABYSS paper. That's a little bit
2 more concrete.

3 Q No. I'd like to talk about all the work you were doing
4 after 1987 on the ABYSS system, sir, okay?

5 You haven't presented any evidence in this courtroom of
6 any modification to any of your ABYSS systems prior to
7 November of 1994 where you or any other researcher at IBM
8 modified that system to use digital certificates, have you?

9 A I have not presented that evidence here, no, sir.

10 Q That's because nobody at IBM thought to do that during
11 that time frame; isn't that true, sir?

12 A No, sir.

13 Q Well, you certainly haven't pointed us to anybody who
14 described doing it in an article, have you?

15 A No, sir, I haven't.

16 Q And you haven't presented us with any evidence that
17 somebody actually built one that would work that way, have
18 you?

19 A No, sir, I haven't.

20 Q And you haven't told us about anybody that you were
21 working with at IBM who, in a hallway, said to you: Hey,
22 maybe we ought to try to use digital certificates with that
23 ABYSS system.

24 You didn't give that testimony, did you?

25 A No, sir, I didn't.

1 Q And don't you think, sir, the fact that there were that
2 many really smart people at IBM who had full working
3 knowledge of your ABYSS system for at least the seven years
4 between when you published the article and when Dr. Stefik
5 filed his patent and the fact that you haven't been able to
6 tell this Court that any of those people came up with the
7 idea of doing what you said is obvious, don't you think that
8 actually has a little bit of relevance to whether or not
9 that invention really was obvious?

10 A No, sir, I don't.

11 Q Okay.

12 A Having been there and having come up with the ideas
13 myself, it takes a long time to come up with good ideas.

14 Q Now, sir, you understand that with obviousness one of
15 the key things that you've got to be aware of and you've got
16 to stay away from is applying what we call hindsight, right?

17 A Yes, sir.

18 Q Now, what do you understand hindsight to be in the
19 context of this legal analysis about whether something is
20 obvious?

21 A Hindsight, in my understanding, is looking back in time
22 and saying: From my vantage point of 2015, I understand how
23 to do things that maybe weren't so clear in 1987.

24 Q Right. And so you can't do that, right?

25 A No.

1 Q You've got to try to erase from your mind all of the
2 information that you accumulated between 1994 and whenever
3 you came up with your opinion on obviousness. You've got to
4 try to put yourself back in that 1994 time frame and tell us
5 what somebody would have thought was obvious back then,
6 right?

7 A That's correct, sir.

8 Q Now, sir, have you ever been faced with a -- a riddle
9 that you just couldn't solve right away, at least?

10 A Yes, sir.

11 Q And then has it ever happened that when somebody tells
12 you the answer to that riddle, you think to yourself, my
13 goodness, that's exactly what the answer was? Have you ever
14 thought that way, sir?

15 A Yes, sir.

16 Q Now, mightn't that be an example of hindsight when you
17 say: Ah, I should have known that? That's hindsight.
18 That's one form of hindsight. Wouldn't you agree, sir?

19 A It could be, yes, sir.

20 Q Now, that's because somebody, when they know the
21 answer, might somehow believe that it was easy to arrive at
22 that answer when they couldn't actually come up with that
23 answer before they were told what the solution was. Do you
24 agree?

25 A Yes, sir.

1 Q Now, the first thing you did when you were retained in
2 this case is you read the Stefik patents, right?

3 A Yes, sir.

4 Q So you knew what Dr. Stefik's solution to the problems
5 he was facing were before you went back and tried to piece
6 together the various pieces that you've said to the jury
7 would have been so obvious to put together.

8 You knew what Dr. Stefik's answers to the problem were
9 before you went back and tried to find out whether it would
10 have been obvious to come up with that same solution; isn't
11 that true?

12 A I don't think I would agree with your characterization
13 of what I did as a process. But you're right, that I read
14 the patents early on in my retention.

15 Q In fact, shortly after you were retained, right? Isn't
16 that what you testified to in your deposition?

17 A Yes, sir.

18 Q And well before you came up with your opinion on
19 invalidity, right?

20 A I hope so, yes, sir.

21 Q Because you weren't asked, for example, as an expert --
22 you weren't put in a room and you weren't given all of these
23 articles and patents that had been published in the field of
24 digital rights management, presented with a problem, and
25 say, hey, pick out for me where all of these articles could

1 be put together to solve the problem of DRM and being able
2 to distribute it to people so that they could get books and
3 TV shows and movies across a public network? You weren't
4 asked to do it like that, were you?

5 A That's not the problem I was given, no, sir.

6 Q Now, you were told what the solution was, and then you
7 were asked to go back and see if you couldn't piece together
8 where you might come up with an opinion that the solution
9 was obvious.

10 That's what happened, isn't it?

11 A No, sir, that's not what happened at all.

12 Q Now, sir, are you aware that -- do you consider
13 yourself one of the early researchers in the field of
14 digital rights management?

15 A I'm not sure I would characterize it that way.

16 Q So you said you've been working in it since at least
17 1984, right?

18 A '82.

19 Q '82.

20 So -- I mean, you've been to a lot of organizational
21 meetings, shows, for example, conferences, for example? You
22 would attend those during the course of your career, right?

23 A Yes, sir.

24 Q And did those conferences tend to start getting bigger
25 and bigger as the years went on after 1982?

1 A It depended on the conference.

2 Q But certainly more people were being -- becoming
3 interested in this field, right?

4 A In what field, sir?

5 Q The digital rights management field.

6 A Yes, sir. It continued to garner a lot of interest
7 over the years.

8 Q Especially as the Internet started to evolve, right?

9 A Yes, sir.

10 Q And that's, in fact, one of the reasons that you
11 started working on your basic Yorktown security system, the
12 ABYSS system at IBM, right?

13 A We actually started working on it before the Internet
14 was a big deal, and we thought primarily of moving things
15 around on diskettes, but we realized that networks were a
16 coming distribution method so we -- we worked on that as
17 well.

18 Q Now, you actually presented your paper, this 1987
19 paper, at at least one conference, right?

20 A Yes, sir.

21 Q Was it more than one conference?

22 A That paper was presented at one conference.

23 Q Okay. And that paper was presented shortly after it
24 was published, is that right, about 1987?

25 A I believe it was -- I believe the proceedings were

1 published after the conference. I'm not absolutely sure.

2 Q No. I mean the conference, sir. The conference was
3 actually shortly after you published or right before you
4 published. Is that what I --

5 A I believe so, yes.

6 Q So shortly before 19 -- the publication date of your
7 article in 1987 is when you presented your ideas at this
8 conference, correct?

9 A Yes, sir.

10 Q And this conference was attended by, what, a hundred,
11 200 people who were also interested in digital rights
12 management?

13 A This was a security and privacy conference, an annual
14 conference that was held on that topic in Oakland, and there
15 were probably between a hundred and 200 people at that
16 particular conference.

17 Q And these people were technical people, right?

18 A Yes, sir.

19 Q In fact, some of them you would say were at least of
20 ordinary skill in the art to which the Stefik patents
21 pertain, right?

22 A Yes, sir.

23 Q Some would have been of extraordinary skill in the art;
24 wouldn't you agree?

25 A Yes, sir.

1 Q Now, you haven't explained to us or told us that any
2 one of those attendees, after they heard you present your
3 article, your ideas in that ABYSS article at this
4 conference, you haven't told us that any one of them came up
5 to you and said: Gee, Mr. White, you know, why don't you go
6 ahead and use digital certificates with that system because
7 that would have been an obvious thing to do?

8 None of them told you that, did they?

9 A No, sir.

10 Q Even though they were interested in this field, right,
11 this DRM field?

12 A Yes, sir, they were.

13 Q And they were of -- many of them at least -- ordinary
14 skill in the art, right?

15 A Yes, sir.

16 Q Some of them of extraordinary skill in the art, right?

17 A Yes, sir.

18 Q Don't you think, sir, the fact that you had a hundred
19 to 200 researchers with that kind of qualifications
20 listening to you present your idea about ABYSS and not one
21 of those individuals, to your knowledge, ever said, would be
22 obvious to go ahead and add digital certificates to that
23 system?

24 Don't you think, sir, that that has at least some
25 relevance to your conclusion about whether or not

1 Dr. Stefik's patents are actually obvious?

2 A No, sir. That's not how inventions work.

3 Q Okay. Now, sir, this ABYSS system that you built, I
4 think you said there were portions of what you describe in
5 your article that were incorporated in an IBM product in
6 about 1990, right?

7 A Yes, sir.

8 Q But that was not a system that was used to sell TV
9 shows or books or movies or music over the Internet, was it?

10 A I don't have a good understanding of what it was used
11 for. It was sold to customers as a cryptographic system,
12 and they used it for whatever they used it for.

13 Q You're not aware of any customers ever using that
14 first -- because that first product in 1990, I think it was
15 the IBM 4755; is that right?

16 A You have an excellent memory, sir, yes.

17 Q I've got a note.

18 And so the 4755 is -- that was the one that didn't have
19 all of the features of your 1987 article, correct?

20 A It was a cryptographic processor as opposed to a
21 processor like a secure processor that could run other
22 applications.

23 Q And it wasn't until IBM built the 4758 that there was
24 actually a machine or a system that you felt used all of the
25 ideas in your 1987 article, right?

1 A It certainly used many of those ideas, yes, sir.

2 Q And that machine wasn't built by IBM until 1999, right?

3 A That's correct, sir.

4 Q That was five years after Dr. Stefik filed his patent
5 applications, right?

6 A Yes, sir.

7 Q And that was even though you had all of the resources
8 of IBM at your disposal to try to help you develop this
9 system. You didn't get one built that actually used what
10 you described in your article until 1999, some 12 years
11 after you published your article, right?

12 A That's correct, sir.

13 Q And even to this day, you're not aware of any of those
14 IBM 4755s, the 1990 machine, or the IBM 4758, ever being
15 used to sell books, movies, or TV shows over the Internet,
16 are you?

17 A Again, I'm aware of what they were -- their
18 capabilities were sold to. They were sold to banks and
19 other financial institutions. They were used for postal
20 indicia, things like -- things that were like stamps, but
21 they were -- they were just printed on labels so they were
22 used for e-commerce. They were used for applications that
23 required money in order to use them.

24 But I don't know of their particular uses for books and
25 movies and songs that they were used for. They could have

1 been used for that, but I don't know that.

2 Q And even those uses that you do recognize, I think you
3 said for currency -- online currency --

4 A Yes, sir.

5 Q -- that wasn't until 1999 and later, right?

6 A In those products, yes, sir.

7 Q So that was five-plus years after Dr. Stefik filed his
8 patent application?

9 A Yes, sir.

10 MR. THOMAS: I have no further questions for this
11 witness, Your Honor. I pass the witness.

12 THE COURT: All right. Redirect, Mr. Anderson?

13 MR. DAVE ANDERSON: No, Your Honor.

14 THE COURT: All right. You may step down,
15 Dr. White.

16 THE WITNESS: Thank you, Your Honor.

17 MR. DAVE ANDERSON: Your Honor, may Dr. White be
18 excused?

19 MR. THOMAS: We have no objection, Your Honor.

20 THE COURT: All right. Dr. White, you're excused.
21 You're free to stay. You're also free to leave.

22 THE WITNESS: Thank you, Your Honor.

23 THE COURT: Ladies and gentlemen, I expect the
24 next witness to be fairly lengthy as well. This is probably
25 not a proper -- perfect time, but I'm afraid this witness is

1 going to be too long for us to wait to take a recess later.

2 So we're going to take a recess at this time.

3 I'll try to make this short. I expect it to be about ten
4 minutes.

5 If you'll leave your books in your chairs. Don't
6 discuss anything about the case. And we'll be back in here
7 shortly to continue with the next witness from the
8 Defendants.

9 But you're excused for recess at this time.

10 COURT SECURITY OFFICER: All rise for the jury.

11 (Jury out.)

12 THE COURT: The Court stands in recess.

13 (Recess.)

14 COURT SECURITY OFFICER: All rise.

15 THE COURT: Be seated, please.

16 Let's bring in the jury, Mr. Nance.

17 COURT SECURITY OFFICER: All rise for the jury.

18 (Jury in.)

19 THE COURT: Please be seated.

20 Defendants, call your next witness.

21 MR. BRYAN ANDERSON: Apple calls Dr. Stephen
22 Prowse, Your Honor.

23 THE COURT: All right.

24 MR. BAXTER: May we approach just a second, Your
25 Honor, while he's coming forward?

1 THE COURT: Yes.

2 Dr. Prowse, have you been sworn?

3 THE WITNESS: Yes, I have.

4 THE COURT: Please come have a seat here at the
5 witness stand.

6 Approach the bench, counsel.

7 MR. BAXTER: Thank you, Your Honor.

8 (Bench conference.)

9 MR. BAXTER: As you know, Your Honor --

10 THE COURT: Yes.

11 MR. BAXTER: -- that there's been a little
12 controversy about Slide -- 1, 2, whatever it is, 3. And I
13 think that the theory had been we were going to wait until
14 Dr. White got off the stand and see if they testified about
15 this, and they didn't.

16 So we, once again, would argue that it's -- it's
17 not appropriate. It's not in his report. And it's not
18 based upon anything that they testified about. This is the
19 non-infringing-alternative issue.

20 MR. BRYAN ANDERSON: The testimony of both
21 Mr. Ward and Dr. Kelly confirmed that SSL is not necessary.
22 That is our non-infringing alternative that is in
23 Dr. Prowse's report and on which he's going to be testifying
24 today, amongst -- so that testimony has been presented here,
25 Your Honor.

1 THE COURT: Now, Dr. Prowse is your damages
2 expert?

3 MR. BRYAN ANDERSON: He is, Your Honor.

4 MR. BAXTER: I listened to Kelly pretty closely,
5 and the words never fell from his mouth.

6 And, of course, Dr. White certainly couldn't have
7 testified about it. It wasn't even his field that he could
8 have testified about, even though I think Dr. Prowse put it
9 in his report that he did.

10 THE COURT: Well, I mean, as I see it, counsel,
11 this Bullet Point No. 1 on your slide gets us back, without
12 saying so in so many words, to the Google situation.

13 MR. BRYAN ANDERSON: No. This is -- this is --

14 THE COURT: This is not what you're trying to do?

15 MR. BRYAN ANDERSON: No, it is not, Your Honor.
16 It's what we discussed this morning. And you looked at your
17 report, and it's in the report on --

18 THE COURT: Calm down, Mr. Briody.

19 MR. BRYAN ANDERSON: So we are not going to ask
20 him about what will be a non-infringing alternative.

21 THE COURT: How do you intend to use this slide
22 with him?

23 MR. BRYAN ANDERSON: So in his analysis, he asked
24 and determined the amount of the cost for Apple not to use
25 an SSL connection for uploading FairPlay software and has a

1 value for that based on the financial information that was
2 provided to him.

3 That's the specific non-infringing alternative we
4 are going to be asking about. It's in the report, Your
5 Honor, and this was in what was provided to Your Honor this
6 morning.

7 THE COURT: All right.

8 MR. BRIODY: Is that in the record? Is there
9 testimony to that, Bryan?

10 MR. BRYAN ANDERSON: That -- there's testimony
11 that SSL is not necessary, yes. And he has the financial
12 information. Dr. Kelly didn't talk about the financial.
13 It's his own investigation based on availability of not --
14 and Dr. Ward -- Mr. Ward also testified about they're not
15 going to need to use SSL. You can use a physical delivery.

16 And that's all this is based on, using a physical
17 delivery instead of a secure connection.

18 MR. BRIODY: Your Honor, if I may, if the only
19 thing that's been discussed are proposed changes to Apple's
20 system, then the only system that's being discussed is
21 Apple's system, and there is no way that they can make this
22 statement based on Apple's system. It can't be done. It
23 hasn't been done yet.

24 MR. BRYAN ANDERSON: The patents also specifically
25 identify -- and that's been what the whole case is about --

1 more than one DRM system. The whole theory behind
2 Dr. Teece's analysis is there is no way to do it but
3 ContentGuard's way.

4 And that's an issue for the jury to decide. I
5 mean, that's really, you know, the crux of this case. But
6 the foundational question from an economic standpoint is, if
7 they are right -- as one issue, if Apple is right, then you
8 don't have a scenario where ContentGuard has the only way.

9 And that's the lens you look at from the
10 standpoint of the economic analysis. That's what was laid
11 out in the reports and --

12 THE COURT: Well, we've discussed these
13 demonstratives previously. I can't reconsider every one of
14 them. We've got the jury in the box. It's a demonstrative,
15 not an exhibit. He can be crossed after he puts on his
16 testimony. I'm not going to change my ruling at this point.

17 (End of bench conference.)

18 THE COURT: All right. You may proceed with your
19 direct examination, Counsel.

20 MR. BRYAN ANDERSON: Thank you, Your Honor.

21 STEPHEN PROWSE, Ph.D., DEFENDANT'S WITNESS, PREVIOUSLY SWORN

22 DIRECT EXAMINATION

23 BY MR. BRYAN ANDERSON:

24 Q Would you please state your name for the record?

25 A Hello. My name is Stephen Prowse.

1 Q Is it Dr. Stephen Prowse, sir?

2 A Yes, it is.

3 Q Dr. Prowse, would you please summarize for the jury why
4 you are here today?

5 A So I'm -- I'm here to give -- today to give my opinions
6 on two topics.

7 Q What are those topics, sir?

8 A The first one is, if the jury finds that any of
9 ContentGuard's patents have been infringed by Apple and that
10 those patents are also valid, I'm here to give my opinion
11 regarding the reasonable royalty that Apple should pay to
12 ContentGuard for use of those patents.

13 And secondly, my second topic is to give my opinions
14 regarding the analyses of the -- of these issues that was
15 testified to by Dr. Teece and Dr. Danaher earlier in this
16 trial.

17 Q Before we get into your opinions, Dr. Prowse, why don't
18 we briefly have you describe for the jury your educational
19 background.

20 MR. BRYAN ANDERSON: Mr. Simmons, if we could
21 bring up -- thank you very much.

22 A Yes.

23 So I received my BA in economics from Cambridge
24 University in Cambridge, England; a Master's of Science in
25 economics from California Institute of Technology in

1 Pasadena, California; and my Ph.D. in economics from -- from
2 UCLA in Los Angeles.

3 Q (By Mr. Bryan Anderson) Where do you live, Dr. Prowse?

4 A For the last 20 years, I've lived in Plano, Texas.

5 Q Do you have a family there?

6 A Yes, I do.

7 Q After finishing your Ph.D., did you find gainful
8 employment?

9 A I did.

10 Q Where did you start your work after your Ph.D.?

11 A I think we have a slide on this that I've prepared.

12 I started my work -- if we go back one -- I started,
13 after I got my Ph.D., at the Federal Reserve Bank in
14 Washington, D.C. The Federal Reserve is the United States
15 central bank. While I worked there, Alan Greenspan was the
16 chairman.

17 And then after working there five years, I went to the
18 Federal Reserve Bank of Dallas where I was a senior
19 economist and policy advisor.

20 Q What did you do after you left the Federal Reserve,
21 Dr. Prowse?

22 A Well, while I was at the Fed, I was also an adjunct
23 professor and taught microeconomics and finance at Southern
24 Methodist University in Dallas.

25 But after leaving the Fed, I went to work at

1 PricewaterhouseCoopers where I performed economic analysis
2 for clients in all sorts of areas.

3 Q What did you do after you left PricewaterhouseCoopers?

4 A I went to KPMG and basically did the same sorts of
5 things, economic, financial, statistical, and valuation
6 analysis for clients involved in a variety of matters.

7 Q Where are you currently employed?

8 A I'm currently a senior managing director at a company
9 called FTI Consulting.

10 Q Have you been published, sir?

11 A Yes, I have. I've written over 20 articles, largely
12 when I was at the Fed, on economic and financial topics that
13 have been published in peer-reviewed academic journals and
14 books and compilations.

15 Q Could you briefly describe for the jury what types of
16 work you do at FTI?

17 A So I basically provide economic, financial,
18 statistical, and valuation consulting services to
19 governments, corporations, and individuals in a wide variety
20 of matters.

21 Q Does all of your work involve litigation lawsuits like
22 this one?

23 A No, it doesn't. A significant part involves pure
24 economic and financial consulting with governments and
25 corporations.

1 Q Have you appeared in court before to offer opinions on
2 the amount of a reasonable royalty in a damages case?

3 A I have, yes.

4 Q Who hired you in this case, Dr. Prowse?

5 A Apple hired me in this case.

6 Q Have you worked for Apple before this matter?

7 A Yes, I have. I've worked for Apple four times before
8 this one.

9 Q In what sorts of matters have you worked for Apple
10 before?

11 A Those matters were all in front of the International
12 Trade Commission. They involved analyzing Apple's
13 domestic -- domestic investments in the United States
14 regarding their research and development expenditures.

15 Q Are you or your company being compensated for your time
16 working on this matter?

17 A Yes. FTI is being compensated for my time in this
18 matter at a rate of \$625 an hour.

19 Q Do you have any financial interest in the outcome of
20 this litigation?

21 A No, I do not.

22 Q Now, previously you said that you had to assume that
23 the patents are valid and infringed. If the jury determines
24 that the patents are neither infringed or that they are
25 invalid, what should they do with the opinions you offer

1 today?

2 A So if the jury finds that the patents are not infringed
3 or are invalid, then my testimony here -- my understanding
4 is it becomes irrelevant because damage -- there are no
5 damages.

6 Q And is that also true of the opinions offered by
7 ContentGuard's damages experts?

8 A Yes, I believe so.

9 Q Now, Dr. Prowse, for purposes of evaluating damages in
10 this case, did you assume the patents-in-suit were valid and
11 infringed?

12 A Yes. As part of the Georgia-Pacific analysis that I
13 performed in this case, which I believe we've heard
14 testimony about before, I assumed the patents were valid and
15 were infringed by Apple. But I am not offering any opinions
16 on those topics at all.

17 Q What sorts of information did you look at in order to
18 inform yourself of the facts of this matter and to form the
19 opinions you have formed?

20 A Well, there was a large amount of data and information
21 available for me to look at, and it would take a long time
22 to describe it all.

23 But basically there were -- there were a number of
24 categories of information that I found very important that
25 would, I think, be relevant at the hypothetical negotiation

1 with regards to the parties' negotiation of a reasonable
2 royalty.

3 Q Could you briefly summarize those categories of
4 information?

5 A Yes. They were Apple's investments in digital
6 rights -- in its digital rights management system called
7 FairPlay, ContentGuard's internal valuations of what they
8 thought a license with Apple would be worth, and the
9 significant licensing history that I could observe of
10 ContentGuard because there are a lot of licenses out there
11 that ContentGuard had entered into for all of their patents
12 with other companies.

13 Q Were you able to attend the testimony of ContentGuard's
14 experts in this matter?

15 A I was.

16 Q And did you find yourself in agreement with them on
17 their opinions with respect to the amount of a reasonable
18 royalty if the jury finds the asserted patents valid and
19 infringed?

20 A No. I have severe differences with Dr. Teece's opinion
21 with regards to a reasonable royalty in this matter.

22 Q Could you briefly summarize those differences for the
23 jury before we begin your further examination?

24 A Sure.

25 There -- there are basically two of them. The first is

1 listed on this slide here, and that is as a basis -- as one
2 of the bases for Dr. Teece's opinion regarding a reasonable
3 royalty in this matter, he assumes that there is one and
4 only one way to deliver digital movies, TV shows, or books
5 in a commercially acceptable way to customers, and that is
6 by using the ContentGuard patents.

7 That's a significant difference with my
8 understanding --

9 MR. BAXTER: And I object to it, Your Honor,
10 outside his report.

11 THE COURT: Overruled.

12 A And that is a significant difference with my
13 understanding of the technology because I understand that
14 there are -- there are different ways of doing DRM that
15 allow you to sell digital movies, TV shows, or books in a
16 commercially acceptable way, only one way -- only one way of
17 which involves using the ContentGuard patents.

18 So that's a significant difference between Dr. Teece
19 and I.

20 Q (By Mr. Bryan Anderson) Do you recall Dr. Teece's
21 testimony that he is not a computer scientist or a computer
22 expert, Dr. Prowse?

23 A I do.

24 Q Are a computer scientist or a computer expert?

25 A I am not.

1 Q So on what basis are you forming your opinion that
2 Dr. Teece is incorrect as to whether or not there is another
3 way to do DRM other than the ContentGuard patents?

4 A So I am not a technical expert, but I have read the
5 patents, and I understand -- and I've read a lot of other
6 documents in this matter. And I understand from those
7 documents, including the patents, that there are ways to
8 deliver -- to do -- develop a DRM system without using the
9 ContentGuard patents.

10 Q Have you had an opportunity to --

11 THE COURT: Just a minute, Counsel.

12 MR. BAXTER: And I object to that, Your Honor, as
13 being far -- without his expertise and not in his report.

14 THE COURT: Well, this expert in damages relies on
15 the technical expert that the Defendants have produced just
16 as the Plaintiff's damages expert relies on the technical
17 experts that the Plaintiff has produced.

18 The damages experts are here to talk about
19 economics and damages. And the question just asked goes
20 beyond that, and I will sustain that objection.

21 MR. BAXTER: And I ask that it be stricken, Your
22 Honor, and the jury instructed to disregard it.

23 THE COURT: Well, I'll grant the objection to the
24 last question and answer about this topic is stricken. The
25 first one I think is all right. This one I think goes

1 beyond it.

2 And at this point, Counsel, we need to get into
3 the actual damages testimony --

4 MR. BRYAN ANDERSON: Yes, Your Honor.

5 THE COURT: -- that this expert is qualified in.
6 Let's go forward.

7 MR. BRYAN ANDERSON: Yes, sir.

8 Q (By Mr. Bryan Anderson) So could you please summarize
9 for the jury your second fundamental difference with
10 Dr. Teece?

11 A Yes. My second fundamental difference with Dr. Teece
12 is that Dr. Teece -- Dr. Teece's analysis essentially is
13 built on multiple survey evidence and theoretical economic
14 models that enable him to come to his opinion of a
15 reasonable royalty in this matter.

16 I think Dr. Teece has wrongly ignored and failed to use
17 a large amount of real-world actual historical data that is
18 very helpful in determining what a reasonable royalty would
19 be in this matter. And by ignoring that data, I think
20 Dr. Teece comes to very flawed conclusions.

21 MR. BRYAN ANDERSON: If we could pull up PD-1211,
22 Mr. Simmons.

23 No. PD-1211. That was a slide from Dr. Teece's
24 presentation.

25 Do you have that available, sir?

1 We'll come back to that.

2 Q (By Mr. Bryan Anderson) What does your focus on the
3 real-world data tell you with regards to the reasonable
4 royalty in this matter?

5 A So my focus on the real-world historical data in this
6 matter tells me that a reasonable royalty for use of the
7 five U.S. patents that ContentGuard asserts in this case
8 would be \$2.3 million.

9 Q Now, do you recall Dr. Teece's testimony where he
10 relied on a 58-percent value from a Dr. Danaher?

11 A I do.

12 Q Did you agree with Dr. Teece's reliance on that
13 58 percent value?

14 A I did -- I do not, no.

15 Q Why is that, sir?

16 A Well, for basically two reasons.

17 First, Dr. Danaher uses a study done by another
18 economist, Dr. Shiller, to come up with this 58 percent.
19 And the 58-percent number is basically coming from a study
20 of video games, 14 video games.

21 And it's my opinion that it's not appropriate to apply
22 a study focused on 14 video games to any kind of market for
23 mobile communication devices like smartphones or to digital
24 content like books, movies, and TVs.

25 And the second reason I disagree with the 58 percent is

1 essentially that the market that Professor Shiller was
2 looking at was a market in which there was a legal resale of
3 video games on a secondary market.

4 And Dr. Teece applies that number from Dr. Danaher in a
5 market for digital content where the market for digital
6 content is illegal for resale in a secondary market.

7 So I think there's too many differences between the
8 study that Dr. Danaher uses and -- and the use that
9 Dr. Teece puts it to, to make that a reliable number at all.

10 Q And do you recall Dr. Teece's slide deck that included
11 a demand curve slide that he utilized in his modeling of a
12 reasonable royalty?

13 A I do.

14 Q Do you recall the source of that demand curve?

15 A The source of the economic model in the demand curve
16 that was -- that Dr. Teece utilized was from Dr. Prince.

17 Q And did you agree with either the demand curve itself
18 or Dr. Teece's reliance on it?

19 A No, I did not.

20 Q Why not?

21 A Well, the model -- the model that was being put forward
22 by Dr. Prince and used by Dr. Teece was a model that
23 basically characterized the market for mobile devices as a
24 monopolistic competition market.

25 What that means is that there is an assumption that the

1 makers and sellers of smartphones are all very -- are all
2 small and identical, and that is absolutely not the case in
3 the smartphone market where there are two essentially major
4 players, Apple and Samsung, and a lot of smaller players.

5 So you have two dominant players and a lot of smaller
6 players, and that's just not the right market to model using
7 a monopolistic competition model. And, therefore, any
8 results coming out of that would be unreliable.

9 MR. BRYAN ANDERSON: Your Honor, I'm going to be
10 getting into financial information that I will have to ask
11 the courtroom be sealed for.

12 THE COURT: All right. At the request of counsel,
13 I'm going to order the courtroom sealed. If you're present
14 and not subject to the existing protective order in this
15 case, you should exit the courtroom and remain outside the
16 courtroom until it's reopened.

17 MR. BRYAN ANDERSON: And, Your Honor, it is Apple
18 financial information, so the Apple representatives could
19 stay.

20 THE COURT: That's understood.

21 Mr. Anderson, this is a demonstrative. You've
22 covered these points.

23 MR. BRYAN ANDERSON: I'm sorry. Can you bring
24 that down?

25 THE COURT: There is no need to leave it up.

1 MR. BRYAN ANDERSON: I apologize, Your Honor.

2 (Courtroom sealed, in a separate volume, Page 3,
3 Line 3 to Page 9, Line 12.)

4 (Courtroom unsealed.)

5 THE COURT: All right. The courtroom is unsealed.
6 You may continue, Counsel.

7 MR. BRYAN ANDERSON: Thank you, Your Honor.

8 Mr. Simmons, if you would bring up AX-923?

9 Q (By Mr. Bryan Anderson) Dr. Prowse, do you recognize
10 this exhibit?

11 A Yes, I do.

12 Q Would you please briefly describe for the jury what
13 this document is?

14 A Yes. This is a calculation I performed to estimate the
15 costs of physical delivery of FairPlay updates to FairPlay
16 servers.

17 Q Why did you undertake this analysis of the cost of
18 physical delivery of updates to FairPlay servers?

19 A Essentially because I wanted to understand the
20 differences between the two parties at the hypothetical
21 negotiation regarding infringement.

22 At the hypothetical negotiation, obviously,
23 infringement is assumed, and I must do that for my analysis.
24 But I wanted to understand, even assuming ContentGuard's
25 theories of infringement are correct, was there a way for

1 Apple to transmit FairPlay updates to FairPlay servers
2 without using an SSL connection, which I understood from my
3 discussions with Dr. Kelly would not infringe, even
4 according -- even according to ContentGuard's infringement
5 theories.

6 Q Did Dr. Kelly tell you that using an SSL connection
7 does infringe in the real world?

8 A No, he did not. I talked to him, and he believed that
9 Apple doesn't infringe by using an SSL connection. But I
10 asked him to assume that ContentGuard's theories of
11 infringement were, in fact, correct. And if they were
12 correct, was there anything Apple could do to avoid using an
13 SSL connection.

14 MR. BAXTER: Objection, Your Honor.

15 A And he answered --

16 THE COURT: Just a minute.

17 MR. BAXTER: Nowhere is it in Dr. Kelly's report,
18 and nowhere in his testimony, Your Honor. He can't base it
19 on anything other than that, and I object to it.

20 THE COURT: What's your response, Mr. Anderson?

21 MR. BRYAN ANDERSON: Your Honor, this is in
22 Dr. Prowse's report. It was in Dr. Kelly's report. I can
23 cite the report sections to you.

24 The testimony coming in from Mr. Ward and
25 Mr. Kelly were that SSL is not necessary, as all Dr. Prowse

1 needed to do to -- in order then to determine what is the
2 cost of implementing a physical carry as opposed to using
3 SSL.

4 MR. BAXTER: And at no time did Dr. Kelly testify
5 to this, Your Honor. I tried to listen pretty carefully.
6 Not one time did those words fall from his mouth.

7 And I object to it, Judge. It's far outside --

8 THE COURT: I understand your objection,
9 Mr. Baxter. You don't need to repeat it.

10 MR. BAXTER: Thank you, Your Honor.

11 MR. BRYAN ANDERSON: And, Your Honor, also, the
12 Ward -- Mr. Ward did testify it's not required, and that's
13 factual evidence before the jury.

14 So really the only predicate for this is, do you
15 need to do it. And all he's -- he's not testifying whether
16 you need to or not. He's testifying as to what it would
17 cost not to, to do the physical delivery.

18 THE COURT: Well, unfortunately, ladies and
19 gentlemen, this objection is going to require me to consult
20 the actual reports involved, and I can't nor am I willing to
21 do that with you in the courtroom.

22 It's 20 minutes after 5:00. What I'm going to do
23 is I'm going to excuse you for the day. I will take this up
24 with counsel outside your presence, and it will be resolved
25 when you come back tomorrow so that we can begin again at

1 this juncture.

2 If you will, leave your juror notebooks on the
3 table in the jury room. Don't discuss the case among
4 yourselves or with anyone else. Follow my other
5 instructions. I'd like to have you back tomorrow so that we
6 can start again at 8:30 a.m.

7 With those instructions, you are excused for the
8 day, ladies and gentlemen.

9 SECURITY COURT OFFICER: All rise for the jury.
10 (Jury out.)

11 THE COURT: All right. Be seated.

12 Dr. Prowse, you may have a seat out in the
13 gallery.

14 Well, we almost got through the trial with me not
15 having to send the jury out to get into one of these kind of
16 objections. I talked with all of you in advance about how I
17 consider them highly disruptive.

18 So we're going to get to the bottom of this, and
19 whoever ends on the losing side of it is going to certainly
20 lose the time involved, and I'll consider whether you're
21 going to lose any more. This is the kind of disruption that
22 should be avoided.

23 MR. BAXTER: Judge, let -- let me make my
24 objection clear. I object on the basis that Dr. Kelly did
25 not testify to this, and he has to base his report on what

1 Dr. Kelly testified about in front of this jury.

2 MR. BRYAN ANDERSON: And, Your Honor, in
3 Paragraph 246 of --

4 THE COURT: Just a minute, Mr. Anderson.

5 Mr. Baxter, he -- this witness bases his report on
6 the technical witness's report, and he writes his report
7 long before this trial starts or he gets in this courtroom.

8 MR. BAXTER: I understand, Your Honor.

9 THE COURT: So he doesn't know what the technical
10 expert is going to testify to. He knows what's in his
11 report, and he relies on that report.

12 So you keep telling me that your objection is good
13 if the technical expert didn't testify to it, but I think
14 the damages expert is entitled to rely what's on the
15 technical expert's report and prepare his testimony whether
16 he knows what the technical expert is going to testify to or
17 not, as long as it's in the technical expert's report and
18 it's there for him to rely upon.

19 MR. BAXTER: And I think, Your Honor, if they were
20 going to do that, they had to have Dr. Kelly testify to that
21 before the jury, and he didn't do so. And that's my
22 objection, Your Honor.

23 THE COURT: I understand your objection. Have a
24 seat.

25 Let me hear from the Defendant.

1 MR. BRYAN ANDERSON: Paragraph 246, I'll summarize
2 one sentence, Your Honor.

3 THE COURT: Just bring it to me, Mr. Anderson, or
4 get me a copy.

5 MR. BRYAN ANDERSON: Okay. Do you have a copy?

6 If I could just read one sentence, Your Honor.

7 THE COURT: Well, I don't want you reading it
8 until I can see it.

9 MR. BRYAN ANDERSON: Very good.

10 There are additional paragraphs on this I can get
11 you, Your Honor, but I think this is the most pertinent
12 conversation.

13 THE COURT: Well, you know, go to a microphone.
14 Don't walk around the room and be talking. We still have a
15 court reporter that's trying to hear and take down what's
16 said.

17 All right. I've got Dr. Prowse's report. Now
18 give me your -- give me your sites you're referring to.

19 MR. BRYAN ANDERSON: Paragraph 246, midway through
20 the paragraph.

21 I understand from Mr. Ward that Apple could
22 transmit new FairPlay software to the iTunes servers without
23 the use of SSL in multiple ways.

24 He has several sections of his report that discuss
25 exactly that. He cites to his footnote -- his conversations

1 with Mr. Ward -- Dr. -- Mr. Ward, as well as Dr. Kelly. He
2 had multiple sources.

3 So his question first was: Can you do it? And he
4 has multiple sources as to can Apple deliver the code
5 without using SSL.

6 And then he did an investigation to determine what
7 would it cost to physically deliver the code instead of
8 sending it over a secure connection.

9 249 is also pertinent, where he describes the
10 relatively simple implementations requiring minimal effort,
11 again citing to Dr. Kelly and Mr. Ward explicitly.

12 THE COURT: What's your response to Mr. Baxter's
13 argument that even though these provisions in the report are
14 here, that this expert is not permitted to offer those
15 opinions unless the underlying technical expert testifies to
16 the technical aspects of it before the jury?

17 MR. BRYAN ANDERSON: Well, this is a fact question
18 in part. It is whether or not Apple needs to use SSL to
19 transmit that code. Mr. Ward said it wasn't necessary,
20 sometimes wasn't done. So that factual predicate for this,
21 that is the underlying dispute between the parties, is
22 whether SSL meets the digital certificate.

23 Dr. Prowse isn't going to opine on that. That's
24 going to be an issue for the jury.

25 The question is, is it necessary for Apple to use

1 SSL. A fact witness has testified in this case that it is
2 not necessary. In fact, it is not always done. And that is
3 the same fact witness that Dr. Prowse relied upon in part
4 for his report.

5 Dr. Kelly also testified. Now, I don't have
6 the -- today's transcript. I thought I heard Dr. Kelly
7 testify that there were alternate ways to do this. But
8 experts can rely on things that are -- are not in the
9 record. They can rely on hearsay.

10 Dr. Prowse doesn't have to do that in this matter
11 because there is actually record evidence on this. There is
12 a slide that was used with Mr. Ward specifically. I think I
13 have that to put in front of Your Honor, ADX-7.3.

14 Or maybe we don't have that.

15 This was Dr. Ward's testimony using a graphic and
16 talking about SSL and whether it was necessary.

17 THE COURT: Yes. I remember Mr. Ward's testimony
18 with this graphic quite well.

19 What's your reply to that response, Mr. Baxter?

20 MR. BAXTER: Two things, Your Honor.

21 First of all, Dr. Kelly never testified this was a
22 non-infringing alternative. Never once. He didn't say
23 that.

24 Number two, when we asked Mr. Ward what he told
25 Prowse, he said he couldn't remember. Now, that's what's in

1 the record before this jury. We had an opportunity to ask
2 Mr. Ward, and he said -- all of a sudden he got amnesia. So
3 the best record is he doesn't know what he told Prowse, if
4 anything.

5 And from Dr. Kelly, not one time did he say, if
6 you didn't have SSL, that that was a non-infringing
7 alternative.

8 Now we know, Judge, from the debacle today that we
9 get from Dr. Kelly that he now has other information that
10 they didn't turn over to us about the -- the rsync and how
11 they really do it. We don't have any testimony on that.

12 That is what they would have to be testifying
13 about as a non-infringing alternative to change that, not
14 change the SSL. That doesn't do them any good. But they
15 certainly didn't testify it was a non-infringing
16 alternative, and that's the testimony he has to have in
17 order for this to work.

18 THE COURT: All right. I think I've heard enough.
19 The rsync matter aside, I've talked to counsel about that in
20 chambers, we'll deal with that separately as a part of the
21 rebuttal case.

22 With regard to this matter, the testimony objected
23 to is clearly in Dr. Prowse's report and there was never a
24 Daubert motion to strike that portion of the report. There
25 was never a motion before the trial began to say that the

1 report wasn't supported by the technical experts that the
2 damages expert relies upon.

3 It cannot be the test that if the technical expert
4 doesn't testify to everything in his report, then the
5 damages expert can't testify to what's in his.

6 The purpose of the expert's report, as everyone in
7 this room knows, is to put the opposing party on notice of
8 what the theories and concepts of the other side is so that
9 you can prepare your witness's testimony to meet it.
10 There's no surprise here.

11 And as I see it, there's an attempt to prohibit
12 Dr. Prowse from testifying to what's properly in his report
13 based on an alleged failure to offer testimony when there's
14 no indication that his report was unsupported and subject to
15 being stricken under the Daubert doctrine in advance of this
16 trial.

17 And we're not going to have a -- an ad hoc Daubert
18 motion raised in front of the jury on the fifth or sixth day
19 of trial to attack what's in an expert's report. The
20 Plaintiff has been on notice of this, and I do not -- I do
21 not find that the Plaintiff's motion is well taken.

22 I'm going to deny the Plaintiff's motion. And the
23 time that we've spent since I sent the jury out is going to
24 be charged to the Plaintiff.

25 And then, gentlemen, we're going to -- ladies and

1 gentlemen, we're going to recess for the day, and we're
2 going to pick up with Dr. Prowse in the morning. And I
3 don't expect this issue to be raised again.

4 Are there questions?

5 MR. BRYAN ANDERSON: No, Your Honor.

6 THE COURT: We stand in recess until tomorrow
7 morning.

8 (Court adjourned.)

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10 *****

11
12 CERTIFICATION

13
14 I HEREBY CERTIFY that the foregoing is a correct
15 transcript from the stenographic notes of the proceedings in
16 the above-entitled matter to the best of my ability.

17
18
19 /S/Christine L. Bickham
20 CHRISTINE L. BICKHAM, RMR, CRR
21 Deputy Official Court Reporter
State of Texas No. 4939
Expiration Date: 12/31/15

11/18/15